The OIL WEEKLY

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FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

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VOLUME 73 JUNE 11, 1934 NUMBER 13

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AMERICA GOES DIESEL

AMERICA GOES DIESEL

Building a road through the East Texas oil field territory with a "Caterpillar" Diesel Thirty-Five Tractor operating on a fuel cost of less than 50 cents per day.

"CATERPILLAR" DIESELS WERE AT THE TULSA SHOW

IF YOU DIDN'T attend the Oil Show at Tulsa last month, perhaps you've talked with some who were there. And if so, you've probably heard "Caterpillar" mentioned. For the "Caterpillar" exhibit attracted many visitors — drew much interest — caused wide comment. "Caterpillar" Diesel Tractors and Power Units that have brought power users the advantage of amazing fuel economy, plus dependability, ease of operation, simplicity . . . winch and boom and compressor equipment made by other manufacturers for use with "Caterpillar" power . . . graders and other machines . . . all these were on exhibit to show the oil industry what "Caterpillar" offers in modern equipment to increase efficiency and cut costs on countless jobs of oil fields, pipe lines, refineries. If you missed the show, let us tell you more about this equipment. Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

VOLUME 73, No. 13 JUNE 11, 1934

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

Removal of price fixing portions of codes under the NRA will not affect the oil industry.

To begin with, General Johnson is running the general NRA show while Administrator Ickes is keeping a tight hand on the petroleum side show, and the animals in the Ickes tent pay no heed to the whip cracking under the big top.

The second reason is, however, a more effective one, in that there has never been any price fixing under the petroleum code. The nearest approach has been in that section which provides that petroleum products must not be sold at less than cost. The question of what constitutes costs is a sort of separate ring in itself where a general free for all is milling.

True, attempts have been made under the oil code to fix a differential between the sales price of branded and unbranded products with varying degrees of success in different parts of the country.

In some of the other codes actual price fixing has been attempted. In still others a cost plus a certain percentage has been tried out. In the American petroleum supplies code no attempt has been made to fix prices, the only provision affecting price under that code being that sellers must post their prices and not change them to the customer until and unless the changes in price have been posted with due notice at code headquarters.

There is some speculation as to whether or not the most recent moves on codes at Washington may not forecast a simmering down of code activities to attempts to control and fix matters pertaining to labor alone. Industry hailed the codes as an opportunity to eliminate cut throat practices and indeed this bait was tantalizingly held out from Washington.

Without meaning in any way to be unduly suspicious we would respectfully call the attention of industry to this well known fact with reference to governmental aid. We have observed it over a period of a number of years and we are told that older and more experienced observers noticed it before we were born.

When an industry goes to its state or federal capitol for aid it usually gets results. The results have been almost invariably governmental interference, higher costs and higher taxes.

Evidently the hard fight led by the American Petroleum Institute against gasoline tax evasion is bearing fruit. Figures just compiled on 1933 gasoline tax collected by states showed that despite a loss in gasoline gallonage amounting to 25,000,000 for the year as compared with 1932, gasoline tax returns collected by all states by all states were up $6,000,000.

The gasoline tax collected by the various states amounted to $518,000,000 for 1933. Federal gasoline tax collections amounted to $181,000,000.

There was practically no change in the gasoline tax rates in the various states, only one state—and it comparatively a small gasoline consumer—showing an increase in the rate.

The fight led by the A. P. I. showed itself in the building of public opinion; gasoline tax laws with teeth in them; improved attitude on the part of state collecting agencies. In many instances states materially increased their collecting forces. Apparently it paid.

The following excerpt from the Shell Company's report dealing with politics is interesting: "In former times politics followed trade but nowadays trade has to accommodate itself to politics and it even looks very much as if trade may no longer judge whether political actions considered from a commercial viewpoint are sound or not."

Oil Control Continues Effective

Congressional adjournment will eliminate uncertainties and benefit industry, regardless of fate of oil bill. Stabilization expected under code, if not under new law. Federal crude taxes promise to strengthen proration. Gasoline prices sag, but are still comparatively high.

By **JACK LOGAN**

WITH Congress on the verge of disbanding, the Thomas-Disney oil bill was about to meet its destiny late last week, and the petroleum industry was due to benefit at least from removal of uncertainties generated by the bill, if not from outcome of the proposal for the new federal law.

Just as other industries and business in general have been uneasy with a "reform" Congress in session, the petroleum industry has been disquieted by the proposed oil legislation, particularly with proponents painting pictures of chaos and destruction which might follow failure of the measure.

Activities and plans of oil companies have been suspended or repressed in some instances, awaiting the industry's new deal, if any. State oil control agencies have been worried about their future status, fearing loss of authority to the national government, and dividing their efforts between fighting the oil bill at Washington and administering the state oil laws back home. The federal oil control agency as it now exists, has also been hot and bothered, hoping for increased power through the proposed new law, and marking time meanwhile with power already possessed under the NIRA oil code; lest too successful results under the code should indicate lack of need for the new law.

With the oil bill agitation out of the way, through passage of the measure or failure to pass, the uncertainties and hesitations will be eliminated, and the industry and the government agencies can get down to business.

Chances for Oil Bill Wane

As the past week drew toward conclusion the oil bill was conceded but slight chance for passage. President Roosevelt and Congress were anxious for the session to close, and the President had not included the oil bill on the "must" list. It was not until mid-week, June 6, that the House commerce committee finished hearings on the bill, and consideration of the measure by the committee in executive session, next on schedule, was not being rushed by the committee chairman. Only swift action by the committee and then on the floor, it appeared, could make the bill's passage possible.

Regulation Through Code Looms

With chances for the stricter law dwindling, the existing federal oil control powers under the petroleum code have assumed increased importance, particularly in view of the recent federal appeals court decision at New Orleans upholding the code. Without the "Federal Petroleum Act," the code will give Secretary Ickes his only authority for controlling oil, and less will be said than lately about the shortcomings of the code.

Although federal agents have not begun bearing down on what Secretary Ickes has called "hot oil gentlemen," despite the New Orleans decision of May 22, they are prepared, apparently, to begin striking fear into the ranks of the violators, upon instruction or insistence from higher up.

For federal men have been steadily assembling evidence against oil law violators for a long period, particularly in the East Texas field, despite the fact they had to be careful a couple of months not to violate federal district court injunctions. It was on February 12 their hands were first tied, through injunction granted by District Judge Randolph Bryant, but the injunction was stayed by the United States Fifth Circuit Court of Appeals, three-judge tribunal at New Orleans, first on a temporary basis April 4, and then permanently May 22 with reversal of Judge Bryant's decision. Because of the litigation, federal agents have not been policing the East Texas field, where the suits originated, and where most of the nation's "hot oil" has been produced lately.

But with announcement of the court decision May 22 the federal men were fully restored to powers originally possessed under the oil code, namely, authority to help the states enforce their oil laws and oil conservation orders. And following that decision the oil code admin-

istration has concentrated the federal agents at Dallas, preparatory to opening a campaign against not only "hot oil" producers but also all other violators of the petroleum code in its various phases.

The hitherto undulating prospects of the Thomas-Disney bill have naturally tended to leave code enforcement up in the air, but now the time for action appears near at hand.

New Tax Will Aid Oil Control

If the way of the oil law transgressor does not prove adequately hard with state agents and oil code administration agents on his trail, perhaps it may get hard enough to be forbidding with federal tax agents also camping along the way. These new menaces to the oil outlaw put in their appearance at midnight June 9, when the bureau of internal revenue of the United States treasury department officially became collector of federal taxes on crude oil at the well head and the refinery. In each case the tax is one tenth cent a barrel, with stripper wells exempt from the levy. The primary object of the taxes is more effective enforcement of oil laws and orders, provision being made that federal and state oil control authorities may have access to records and reports kept by the collectors of the taxes.

Prices Drop Back from 1934 Peaks

During the past week the refined oil markets tended toward weakness. There was not much change in filling station and tank wagon prices for gasoline, following nation-wide gains of recent weeks. But gasoline prices at refineries drifted lower, particularly throughout the Mid-Continent, where all three grades were one eighth cent lower at the middle of the week than they had been a week earlier. Despite this recession, however, the wholesale prices remained relatively high, as the quotations in effect the two preceding weeks had represented "highs" for the year.

That earlier buoyancy of prices had been due in large measure to purchase of surplus or distress gasoline by integrated companies, through a voluntary plan sponsored by the oil code administration. Conversely, the decline of the past week was attributable in part to slackening of the inter-refinery purchases, with plant owners finding themselves with more gasoline on hand than orders justified.

At mid-week the refinery prices on gasoline in the Oklahoma-Kansas region were averaging around 4⅛ cents a gallon for third grade, 4⅝ cents for standard grade, and 4⅞ cents for premium grade. In East Texas they averaged 3⅞, 4⅜, and 4⅝ cents, respectively.

East Texas "Hot" Oil

Gasoline made from "hot" oil and therefore enjoying a cost advantage, has been a factor in depressing Mid-Continent markets throughout history of the East Texas field and the related refining district, but price weakening of the past week could not be connected with that situation. For "hot" oil production in the area rocked along at about the same rate as in the past several weeks, apparently averaging less than 50,000 barrels daily; while it was indicated that if any change in enforcement occurred it would be for the better, since the federal oil code agents and federal well head and refinery tax agents were expected to contribute shortly toward stricter control.

The prospects of federal help served as an antidote for the recent disturbing developments in connection with the Texas Railroad Commission's regulatory activities in East Texas, involving resignation of a commission engineer and threatened discharge of the commission's chief enforcement officer in the area. The two men have been given much credit generally for better enforcement of proration lately, and it was because the "administrative chief" fired certain commission-appointed employes on the grounds of inefficiency that the strained situation arose.

Profits-Drought-Dividends-Taxes

Under the caption, "From Red to Black," the NRA claims credit for $98,000,000 of profit for 210 industrial corporations in the first quarter of 1934, compared with $23,000,000 deficit the opening quarter of 1933. Among 14 industries listed is petroleum, with 15 firms which earned $5,865,000 profit the 1934 first quarter, compared with $11,916,000 deficit the 1933 first quarter.

Drought conditions have adversely affected gasoline consumption in the Middle West, but the effect from a national demand standpoint has not been appreciable, since the region has relatively low density of population.

Cash dividend payments by companies of the Standard Oil group in the 1934 second quarter will be the highest, it is estimated, since the first quarter of 1931.

The $700,000,000 dug up in the United States in 1933 for motor fuel taxes was the largest gasoline tax bill ever paid.

A high official of an integrated oil company says the production branch of the industry is making money, the refining branch losing, and the marketing branch breaking even. The smaller refining companies with no crude production, he says, are in hard circumstances.

First quarter gasoline consumption was 10.86 percent higher this year than last, according to the A.P.I., and for the closing month of the period the gain was even greater, March having been up 12.3 percent.

Final Effort *Being Made by Ickes To Force Through* Control Bill

Washington, D. C., June 8.—Another effort to force the oil control bill through Congress before the adjournment of the session will be made by the administration, it was learned today.

Following one of a number of trips to the White House, which Secretary of the Interior Harold L. Ickes has made during the week in behalf of his measure, it was indicated that President Roosevelt would confer with members of the House Committee to determine whether it might not be possible to overcome the mounting opposition to the measure and procure a favorable report without further delay.

For several days, the secretary has spent much of his time traveling between his office, the White House and the Capitol in futile endeavor to beat down the opposition. Observers believe he did his cause no good yesterday when he accused Committee Chairman Rayburn of 'scuttling" the bill and antagonized not only the congressman but a number of his friends.

The full weight of organized labor's influence has been thrown to the anti-legislation group in a brief filed with the committee by the American Federation of Labor, opposing enactment of the bill.

Facing a stone wall in the person of Representative Sam Rayburn of Texas (Bonham), chairman of the House Interstate and Foreign Commerce Committee, who has been consistently opposed to the legislation from its very inception, administration officials today practically admitted the defeat of the Thomas-Disney oil control bill.

Charging the Texan with "scuttling the bill," Secretary of the Interior Ickes declared that "if Sam Rayburn would get behind the bill, it would pass with no trouble at all," adding that he had been informed the congressman was passing the word around at the capital that the interior secretary was luke warm toward the measure.

Last hopes of the administration died Thursday when Rayburn failed to call his committee together to consider the bill and made it known that no consideration would be given it before Saturday at the earliest.

"It is just a case of playing with dynamite" not to pass the bill, the secretary asserted.

Conceding the defeat of attempts to push the bill, Congressman Disney of Oklahoma, its sponsor in the House, on Thursday declared that if it was not reported by Friday night he would "wash his hands of the whole affair."

Commenting that "we are having a pretty hard time controlling production now," Secretary Ickes refused to discuss whether the administration would encounter additional difficulty if the bill failed to pass.

Entire blame for killing the bill is placed by the secretary at Rayburn's door. "The chairman of the committee is pretty powerful," he said bitterly.

The New Orleans decision will not save the situation, the secretary admitted, charging that the court ruling was used by opponents of his bill as an "alibi." The oil administrator denied that the President has withdrawn his approval of the legislation.

The secretary's charges elicited an immediate reply from Representative Rayburn, who asserted "there has been no scuttling of the oil bill."

"We only closed hearings Wednesday," he pointed out, "and have had no opportunity to consider the bill in executive session to make up a report."

The committee chairman characterized as a falsehood any statement that he had said Ickes was luke warm toward the measure.

Opponents Close Arguments

After the most bitter attack yet aimed at the Thomas-Disney oil control bill, opponents of the legislation on June 5 brought their presentation to a close before the House committee on interstate and foreign commerce.

Declaring that the oil industry today is the most prosperous in the country, Jack Blalock of Marshall, Texas, representing the Independent Petroleum Association of Texas, told the committee the legislation would hurt it immeasurably and asked why it should be singled out "to demonstrate the change in our basic form of government now taking place."

"It's the most prosperous industry in the country now," he said. "If you don't believe it, line the producers up and ask them how much their royalty and dividend checks were last month."

Blalock warned the committee that the measure would be declared unconstitutional by the courts. A lawyer himself, he cited Chief Justice Hughes of the United States Supreme Court as saying that a control-of-production act would not be valid.

"This act must fail because there is no emergency, because of peculiar conditions in Texas, because it is unconstitutional, and finally because it is basically wrong," he charged.

Recent legislation has so increased the control of the Texas Railroad commission that within 30 days that body will make "it so damned tight they will be coming up here to ask you to unregulate," Ernest O. Thompson, a member of the commission asserted.

"We prefer to have our purely internal affairs conducted by men in Texas," he commented, "whom we can vote for or against and thereby register our approval or disapproval of their acts.

"It is more the desire to make money," he alleged, "than the conservation motive that is causing this wild scramble for more and more centralization and more and more legislation."

Comparing Secretary Ickes' attempt

Pipe Line Divorce Offered As Amendment to Ickes Bill

Washington, D. C., June 7.—Members of the House Interstate and Foreign Commerce Committee Thursday held a 30-minute hearing on the bill for divorcement of pipe lines introduced by Representative Sterling B. Strong of Texas (at-large, Dallas), which is to be offered as an amendment to the oil control bill should that measure ever reach the floor.

Separation of pipe lines from major oil companies would do more to eliminate monopolistic practices than anything else, the committee was told by Representative Jos. W. Bailey of Texas (at-large, Dallas). Ownership of the lines, he asserted, gives the majors "complete control and domination of the oil industry."

"The profit they make on transportation of oil for independent companies allows them to take a loss on other types of operation and dictate to the entire industry," he explained.

The measure was also supported by W. G. Williams of Fort Worth, who asserted that the pipe line companies have shown a 25 percent net profit in the past five years and denied that segregation would cause the loss of any oil in ground worked through stripper wells through the suspension of operations, pointing out that if any of these well were closed down now they would be reopened and the oil recovered when present flush fields began to dry out.

President Roosevelt has declared himself in favor of legislation to divorce pipe line operations from other activities, it was declared by Congressman Strong.

to increase employment, as oil administrator, under the petroleum code with his effort to control rigidly the operations of the industry, J. R. Parton of Shreveport, La., president of the Woodley Petroleum Company, declared that labor would be hurt by the measure, particularly by its regulation of well drilling.

"There is no appreciable waste of oil anywhere in the country," he insisted.

Asked by Chairman Rayburn what would happen if the government should buy the East Texas field and shut it in, as proposed some months ago, Parton said, "it would stay there, and oil would go over 2 per barrel."

"This bill seeks to reserve the profits from oil to the comparatively few land owners and oil men who have already found oil deposits underlying their land, and to discourage oil finding because the plan-of-development clause makes only the large solid block lease ownerships the basis for wildcat operations," he contended.

"Under acreage proration, inspired by the plan-of-development clause in this bill, the value of small tracts to land owners who have not leased their land will never be enjoyed again in new fields to be discovered in all the states for all time under the operation of this bill as law.

"The small producer who is unable to pay the price for a 40-acre or 100-acre unit under this bill will be eliminated as a purchaser, and the land owner will be left to the mercy of the large integrated oil company.

"The Standard Oil Company and most of the other large oil companies especially like and have always sponsored this 'plan-of-development' idea, because they have most of the oil land under their ownership and because they prefer not to drill all of the wells that the land owner can force them to drill under their lease contract. The plan-of-development means less drilling and producing cost to them and consequently greater profits to their New York headquarters.

The passage of this bill for all time cut off opportunity to the land-owner in all the states that have potential oil lands within their bounds. The interest of our great farming class of people who own so much of the land demands permanent elimination of legislative features that would be subterfuge or otherwise attempt to impose acreage proration of oil production.

"It is admitted by oil men and petroleum geologists and has even been recognized by the courts," he concluded, "that the more wells you drill in a field the greater the quantity of recoverable oil from that field. Therefore, the matter under discussion cannot be urged as a conservation measure. The sponsors of this bill have spoken of 'butchering oil fields' by disorderly drilling. They imply that waste follows. But the waste is not taking place under present methods.

"What they mean is that competitive drilling butchers the profits from oil fields and divides those profits among too many of our people."

Expressing his opposition to any type of government regulation and asserting that the industry could get along much better if there were no government interference, Edwin W. Pauley, independent California producer, charged that the measure discriminates against small producers and that its passage would practically sign their death warrant.

Uncontrolled Competition Destructive

Winding up its hearings June 6 with rebuttal testimony from proponents of the bill, the committee was told by W. B. Hamilton of Wichita Falls that uncontrolled competition is destroying Texas oil fields and that several which should be producing are dry because of the mad race to get out the oil.

For the first time the coal industry made public the losses it has suffered through the competition of fuel oil, John G. Battle, secretary of the National Coal Association, appearing in behalf of the control bill. Uncontrolled regulation has made fuel oil so cheap that it has displaced more than $75,000,000 worth of bituminous coal a year, he said.

Ninety percent of the independent producers are in favor of the bill, which has been approved by all but two of the oil organizations of the country, it was asserted by H. B. Fell, executive vice president of the Independent Petroleum Association of America, who submitted for the record 103 messages received by the president, all but four in favor of the bill, and 100 on letters, telegrams and editorials in support of the measure.

"The real purpose of this proposed measure is to balance supply and demand and eliminate the existing evils resulting therefrom," he said. Control of imports is an important feature of the plan, but that provision in the Disney bill would make possible a small increase in imports "at the very least," which was not intended. To meet the need for better legislation on the subject he submitted an amendment providing that:

"The Secretary of the Interior, through quotas if necessary, shall limit the importation of petroleum and its products, including natural asphalt, to such amounts as will prevent imports of petroleum and its products, including natural asphalt, from unreasonably interfering with current domestic production by supplying an undue proportion of the domestic consumptive and export demand for petroleum and its products, including natural asphalt. The Secretarry of the Interior shall not permit in any month the importation either of crude petroleum or any product of crude petroleum, including natural asphalt, in excess of the average monthly imports of such crude petroleum or of any such product of crude petroleum, including natural asphalt, during the last six months of 1932. The treasury department shall apply and enforce at ports of entry the quotas and restrictions so established."

Denying that the bill would create a "dictatorship," as charged by opponents, Fell declared "it merely creates a means of effectively keeping production down to consumptive demand and providing for a national umpire who shall determine on a proper basis the amount of oil that each state shall produce.

"The major portion of the oil industry and particularly the majority of the independents in the industry feel that this legislation is essential for their protection," he added.

Overproduction of not less than 150,000 barrels a day is making the code ineffective, it was asserted by Charles Fahy of the Petroleum Administrative Board, appearing in lieu of Secretary of the Interior Ickes. Half of the overproduction is in East Texas, but a number of states are failing to adhere to their allocations, he explained.

Expressing the conviction that no states rights are unduly invaded by the bill Fahy said the government has the same right to control oil production from state lands as it would have to prohibit opium production from poppies grown on the same lands.

Further, he said, meeting charges that the bill would increase consumer prices, no intent to raise prices was evinced by the framers of the measure, of whom he was one, but on the contrary, the consumer is protected because an excessive rise in prices would cause production quotas to be increased.

On the other hand, he warned, if unrestricted competition continues the consumer will soon be charged undreamed of prices as a result of a shortage of oil.

Following the final presentation of argument on the bill, a number of members of congress appeared before the committee, including Representatives Bailey and Eagle of Texas, both of whom opposed the bill.

MEN IN THE INDUSTRY'S NEWS

D. J. MORAN, president of the Continental Oil Company, headed a party of executives, who are making an inspection tour of all company properties. The trip of 8000 miles is being made by bus, which left Ponca City May 28 and will return there June 23.

Other officials on the tour are George F. Smith, treasurer; E. E. Karstedt, vice president in charge of marketing; Harry J. Kennedy, general sales manager; O. B. Lloyd, P. Y. Ryan and L. T. Cramer, assistant general sales managers; E. J. Nicklos, vice president in charge of production; R. E. Collum, vice president in charge of production west of the Rocky Mountains; H. K. V. Tompkins, vice president in charge of exploration east of the Rocky Mountains; E. O. Bennett, chief engineer; W. H. O'Connor, purchasing agent; G. W. Evans and J. D. Boyles, assistant purchasing agents; J. G. Dyer, manager pipe line division; George D. Olds, Jr., assistant to the president; Wesley I. Nunn, advertising manager; Emerson G. Smith, supervisor of publications; G. T. Bodman, auditor; W. H. Zwick, general attorney; T. D. Harris, manager of motor transportation; P. H. Kuhns, manager of railway sales and traffic.

M. N. (DUCK) AITKEN, actively identified with the distribution of industrial process controls for the Mason-Neilan Regulator Company in Chicago and Philadelphia during the past several years, has joined the staff of Maintenance Engineering Corporation, Houston, Texas, serving in a sales and engineering capacity.

W. A. SNYDER, superintendent of production in Kansas and Oklahoma for Atlantic Oil Producing Company, has resigned to enter the drilling contracting business and will make headquarters in Kansas. He is succeeded by John H. Stewart who for the past several years has been division production engineer in Kansas and Oklahoma.

M. A. MALONEY, veteran scout for Gulf Production Company in North Texas, has been restored to scouting duty in Archer and Young Counties after spending the past several years in the production department of the company at Breckenridge, Texas.

WILLIAM G. BLANCHARD, geologist, who has been working in Florida, is now on a visit to Shreveport, Louisiana.

W. L. McCARTY, superintendent of gasoline plants in the Drumright district for Pure Oil Company, and Frank H. Martin from the same district, have been transferred to the Tulsa office through the company's new plan of directing natural gasoline extraction under the production department.

CLARENCE H. LIEB, president of Carter Oil Company, was principal speaker at the Oklahoma City Chamber of Commerce weekly luncheon on Friday, June 1.

MARVIN A. SMITH has been placed in charge of the recently opened Tulsa office of Eagle Picher Sales Company, the insulation division of Eagle Picher Lead Company. The office is at 312 Thompson Building.

MISS BETTY KELLETT, micro-paleontologist in the Wichita, Kansas, office of Amerada Petroleum Corporation, will be married on June 30 to Edouard H. Nedeau of Providence, R. I. Miss Kellett, a graduate of the University of Kansas, is one of the outstanding women geologists in the industry and it was largely upon her work that a recent cross-section of the state of Kansas was recently prepared. They will make their home at Lake Charles, La., where Mr. Nadeau is associated with Stone & Webster.

PAUL KING, formerly manager of the Wichita and McPherson, Kansas, stores for Republic Supply Company is being transferred to Tulsa where he will be a city salesman.

D. C. INGERSOLD, in the Union Oil Company's land department for a number of years, headquarters in Los Angeles, is now doing special work in the land department of The Texas Company in California.

H. F. SCHOONOVER, superintendent of production for Pure Oil Company in the Texas Division with headquarters at Fort Worth, is recuperating from a critical illness sustained several months ago, having arranged to spend the next month at Corpus Christi, Texas.

A. C. TEMMEL, National Tube Company, Tulsa, received a fine Memorial Day gift. At 3:35 p.m. that day he became "Daddy" Temmel to a bouncing baby boy.

JOHN M. LOVEJOY, president of Seaboard Oil Company (Delaware), and subsidiary companies with headquarters at New York City, visited last week the district offices of the Texas-Seaboard Oil Company, a subsidiary that has been unusually successful in building up crude reserves in the Woodbine sand belt of East Texas in recent years.

DIED:

JOHN T. DILLON, SR., 74, died in New York City, on Monday, June 4. Interment was made at Buffalo, New York, on Thursday, June 7.

Mr. Dillon is survived by his wife and nine children, among the latter being J. T. Dillon, Jr., president of Struthers-Wells-Titusville Corporation; Thomas Dillon, vice president of Struthers-Wells-Titusville Corporation; and R. E. Dillon, vice president and general manager of Lake Erie Engineering Corporation.

Mr. Dillon had been identified with the oil equipment business since its early days. He was chairman of the board of Warren Axe & Tool Company, of Warren, Pa.; president of Lake Erie Engineering Corporation, of Buffalo, New York; a director of Marine Trust Company, of Buffalo, and was former president of Struthers-Wells-Titusville Corporation. Mr. Dillon founded the Titusville Forge Company and for a number of years was president of Titusville Iron Works Company.

ROY IRWIN, 52 years old, drilling contractor, died at Mt. Pleasant, Michigan, June 1 from injuries suffered in an automobile accident. The body was removed to Marion, Indiana, for burial. Mr. Irwin first drilled in the Mt. Pleasant district in 1916 but then went back to the Indiana-Ohio district until about six months ago when he returned here. Surviving are his widow and three children.

IKE N. ADAMS was claimed by a fatal illness at Beeville, Texas, on May 19, 1934. Mr. Adams was born at St. Mary's, West Virginia, on July 11, 1887, and from the age of 18 years he had been continuously identified with oil and gas pipe line enterprises. At the beginning of Houston Pipe Line Company in June, 1925, he joined that organization as superintendent of fields, a position he occupied at the time of his death.

Deep Well Drilling *Record of 11,377 Feet Possible Largely Due to* Improved Technique

FOR the first time in the history of drilling for petroleum a well has penetrated into the earth in excess of 11,000 feet. This remarkable achievement is made all the more noteworthy in view of the fact that the operators had no intention of boring to this tremendous depth when the test was commenced, and its successful operation must be regarded as another milestone in deep well drilling. Improved technique and equipment were outstanding factors that made this remarkable record possible. Not only has the well been drilled to 11,377 feet, but a string of casing has been landed successfully at that point. The outcome of its production test will be watched with much interest.

It was indicated late Friday afternoon that a string of tubing would have to be run into the well to wash the hole before the production test could be complete, due to thickness and weight of the 6000 feet of mud still in the hole. It has been swabbing and showing a little oil and gas, but little headway can be made. The show of oil and gas coming up through so much extremely heavy mud is giving some encouragement.

GENERAL Petroleum Corporation's Berry 1, located in the South Belridge field, San Joaquin Valley, California, was projected for an exploratory test of sand measures underlying the middle Miocene brown shale horizon, comparable to the Belridge sand zone of the North Belridge field and the Kettleman sand measures of the Kettleman North Dome field, commonly referred to as Miocene "Temblor" strata. A liner has been run and a production test is due in the next few days.

The well was spudded on September 20, 1930, and drilled to 8261 feet, at which depth operations were suspended on March 16, 1932, on account of a general curtailment of development operations. Drilling was resumed on August 11, 1933, and the final depth of 11,377 feet was reached on May 29, 1934.

Due to a considerable thickening in shale members of the upper and middle Miocene in this locality, and the absence of sand measures in the shale correlative with the Belridge sands of the North Belridge field, it was necessary to drill this well to a much greater depth than was originally anticipated, in order to penetrate lower sand measures known to exist at North Belridge and which might reasonably be expected to underlie this locality. The Carneros sand zone was encountered in coring at 11,200 feet, and has been penetrated 177 feet. Cores obtained at intervals in the zone show that the sands are hard, compact, and fine to medium grained. All sands gave a good cut with ether, and a considerable showing of gas and oil was evidenced in the mud in the circulating ditch, particularly when returns were first obtained from bottom after running in with the drill pipe. These showings were dissipated as circulation continued, due to the heavy weight of the mud fluid. After the 6⅝-inch casing was landed and cemented, and during the later stages of drilling. The weight of the mud fluid was held within the ranges of 104 to 112 pounds per cubic foot, in order to combat the high gas pressure encountered.

Notwithstanding the great depth to which this well was drilled (approximately 2.15 miles), and the fact that very little extra heavy or unusual equipment was used, drilling operations were carried forward with a minimum of serious trouble; there being no twist offs of drill pipe and only three fishing jobs of consequence recorded during the entire drilling operation. Drill pipe was stuck seven times, but was successfully freed each time without any attendant fishing job.

A review of the well record indicates that there was probably some degree of good fortune, in as much as all trouble experienced in drilling was overcome without serious difficulty. Inestimable credit, however, must be given the workmen on the well for minimizing the hazards through careful and painstaking work.

While the problems connected with this project were at all times given careful consideration by the management and technical staff, the real credit for the successful completion of this well, at an unusual depth, should go directly to the drilling crew and to the superintendent in direct charge of the well. Each driller, and every member of their respective crews, is deserving of individual credit for their splendid cooperation and their careful and intelligent workmanship.

In drilling the well, 27-inch hole was drilled from the surface to 728 feet, 18¾-inch hole from 728 feet to 4534 feet, 12-inch hole from 4534 feet to 7761 feet, 7¾-inch hole from 7761 to 9972 feet, and 5⅝-inch hole from 9972 to 11,377 feet.

All drill pipe used in conduct of this operation was of A. P. I. standard size and weights. Flush joint drill pipe was used on the bottom of the three-inch drill string in drilling ahead after the 6⅝-inch casing was landed and cemented. Six-inch drill pipe was used in drilling from the surface to a depth of 4534 feet, five-inch drill pipe from 4534 to 7761 feet, four-inch drill pipe from 7761 feet to 9972 feet, and three-inch drill pipe from 9972 feet to 11,377 feet.

The casing record of the hole is as follows:

Casing	Weight	Depth	Date
20 inch	106 lbs.	Cemented 728 feet	September 29, 1930
13⅜ inch	61 lbs.	Cemented 4534 feet	May 22, 1931
8⅝ inch	36 lbs.	Cemented 7752 feet	January 4, 1934
6⅝ inch	26 lbs.	Cemented 9717 feet	January 18, 1934

1754 feet of 4¾-inch liner, 16 lb, landed at 11,377 feet, May 31, 1934, top of 4¾-inch liner 9623 feet, perforated from 10,376 to 10,705 feet and from 11,194 feet to 11,377 feet. 4¾-inch flow string, 16 lb, suspended to 9616 feet, June 1, 1934.

The casing used was all A. P. I. standard specifications; the 13⅜-inch and 8⅝-inch casing being all Grade "C", while the 6⅝-inch and 4¾-inch strings were mixed, partly Grade "C" and partly Grade "D". The drilled hole was thoroughly conditioned before running each string of casing, and as a result, no difficulty was experienced in landing and cement-

ing the several strings of casing at the objective depths. Flush joint casing was used on the bottom of both the 6⅝-inch and 4¾-inch strings.

On account of the hazards connected with the running of the exceptionally long string of 4¾-inch casing, needed to case the hole from the surface to the depth of 11,377 feet, this string was run in two sections. The first section, or liner, consisting of 1754 feet of flush joint casing with a specially designed combination adapter and left hand joint at the top, was run in on drill pipe; this was successfully landed on bottom and the drill pipe backed off at the left hand joint. The balance of the 4¾-inch casing was then run in to a depth of 9616 feet; this portion of the 4¾-inch casing, which will serve as a flow string, was held approximately seven feet off the top of the liner. The break of seven feet between the top of the liner and the 4¾-inch flow string will provide space for any expansion of the casing due to high temperature at depth, and also a means of circulation to assist in bringing in the well or to kill the well should any emergency arise which would necessitate such a step.

Drilling progress varied greatly during the course of the operation, from in excess of 100 feet per day in the upper hole to as little as one foot per day at intervals between 7000 feet and 9000 feet, where the formation was found to be extremely hard and where special bits were resorted to in order to make progress. Strange is it may seems, drilling progress was even greater in the last 1000 feet of hole drilled than at some intermediate depths.

Equipment

In order to provide ample working space in the substructure, the derrick floor was built at a height of 10 feet above the ground and supported by heavy concrete piers and steel girders which bridge the cellar, leaving the latter unobstructed by posts. The cellar is 13 feet square by 8½ feet deep, and is reached by a stairway of gentle slope. Blow-out preventers and control valves necessary for protection in cases of emergency during the drilling operation were installed in the cellar, where they were easily accessible. Careful control of the mud weight, however, obviated the use of this equipment.

The derrick was A. P. I. standard 122-foot, steel construction, with normal reinforcing, and had more than adequate strength for all loads imposed upon it.

Electric power was used, two 25/65 horsepower motors driving the drawworks and table through a differential gear drive. Forced ventilation provided by auxiliary motors and blowers was provided. A 100-horsepower, four-cylinder, gas engine was maintained on the standard end for emergency use in case of power failure, but was not needed for this purpose and was used only for incidental work such as tonging pipe and spooling line.

A three-shaft, four-speed, drawworks of design now several years old was used and proved satisfactory. Both blocks carried five sheaves, and 10-part reeving of the line was used during the latter part of the job. The crown block was of double-deck construction. A nine-inch spring hook was used most of the time but a special connector was used in its place for some of the heavy work. Automatic slip-type elevators and spiders were used for handling the casing 2-A 125-ton swivel, the design of which is now several years old, proved satisfactory.

Geared mud pumps, 6¾ by 14 inches, were used and were driven by 26/65 horsepower motors with forced ventilation. Two of these pumps were in the original installation, another was added as a sump pump, and another similar one with a 3000-pound fluid end was added later to meet the higher pressures encountered.

A rotary table of design now several years old proved reasonably satisfactory. A roller-type kelley bushing was used to provide more sensitive control of weight on the bit.

During the latter part of the job, a hydraulic brake was installed to supplement the compound lever friction brakes, and a tremendous economy in the use of brake lining was effected as well as providing an added safety factor when running in the hole with the drill pipe.

Service of 9792-mile tons was procured from one pair of brake bands with the aid of the hydraulic brake (this is one-half of the mile-ton service credited to wire lines during the same period because brakes do only a nominal amount of work when coming out of the hole). This equipment also relieves the drillers of much manual labor and discomfiture from smoking bands, thereby permitting them to give closer attention to the work on hand.

A vibrating screen was used throughout the drilling of the well and was undoubtedly a tremendous help in minimizing stuck drill pipe, obviating replacement of mud, and reducing wear on pump parts.

Customary rubber pistons proved fairly satisfactory during earlier stages of drilling, but steel valves were used as the pressure increased. Rubber hose proved satisfactory for even the higher pressures encountered, although a steel hose was kept in reserve for combating possible blowouts.

Mud materials were carefully selected and blended to give the desired properties. Some raw materials and some prepared materials were used.

Special Equipment

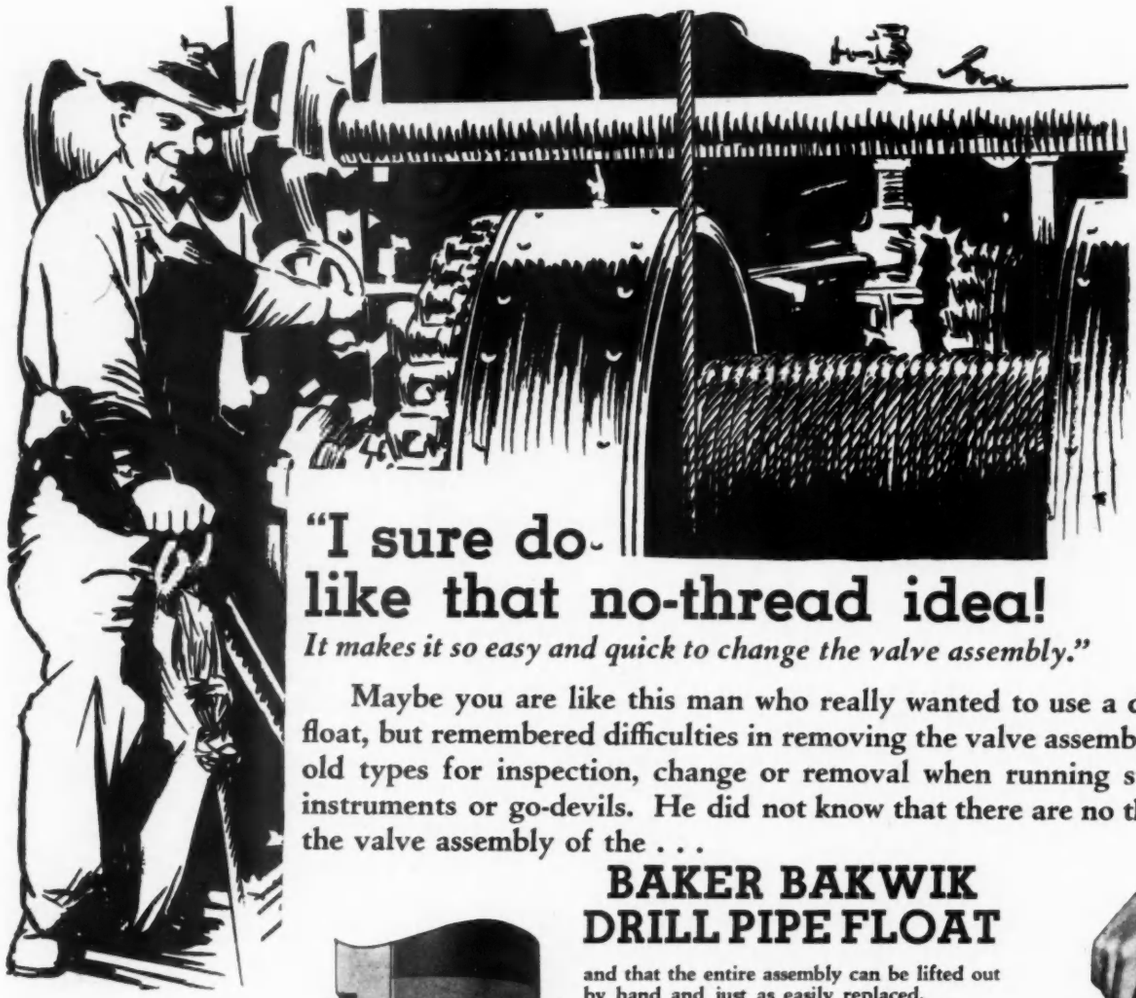
Careful control of weight on bottom is credited not only with maintaining a straight hole but of avoiding twist-offs and other mechanical trouble. This control of weight was, of course, ultimately up to the superintendent and drillers but their work was facilitated by the differential weight control and the customary weight indicator and recorder.

A recording tachometer of the electrical type was connected to the rotary table in an attempt to determine what speed of rotation gave the best drilling progress in the exceedingly hard formation and while it has not led to any general conclusions its continued use should be a guide to intelligent drilling of future wells. A recording voltmeter gave a record of whether the power had been off and whether the voltage had been maintained at a satisfactory value. Indicating and recording wattmeters on the drawworks motors and pump motors indicated to the drillers the torque that was imposed on the drill pipe and whether the motors were overloaded. A mud pump relief valve of special design was used and an electric cutout was provided for automatically shutting off the motors if critical pressures were exceeded.

Special apparatus was provided for measuring not only the weight but the consistency, sediment content, and settling rate of the mud used. This careful measurement and control of the mud properties, assisted by the vibrating screen aforementioned, is considered one of the principal factors in the success of the job.

Bits, core bits, and reamers of many makes and descriptions were used. Rock bits proved necessary for most of the latter part of the hole and at one time diamond-set core bits were resorted to. Less than one foot was drilled in a number of cases before the rock bits were completely worn out, which accounts for the slow progress made.

Casing lines of different makes, grades, and types were used. Grade "J" line was found satisfactory. The size was one inch and by reeving enough parts (maximum 10) and floating the casing strings in, it was never loaded to the danger point. Steel-center lines gave good service when loads were heavy. They retained their diameter and therefore spooled more smoothly.



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It makes it so easy and quick to change the valve assembly."

Maybe you are like this man who really wanted to use a drill pipe float, but remembered difficulties in removing the valve assemblies from old types for inspection, change or removal when running surveying instruments or go-devils. He did not know that there are no threads in the valve assembly of the . . .

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Perhaps you, too, have wanted a drill pipe float with a "full hole" passageway, equal in area to the tool joint, equipped with a safe, positive-acting valve, leakproof even when the thinnest circulating fluid is used.

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Eliminate annoyance and expense from plugged bits.

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—Abrasion-resistant valve assembly of *alloy iron.*
—Valve held in place by tool joint pin—no threads.
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—Measurements of drilling string are never changed.
—Full-hole construction does not retard circulation.
—Exacting Baker Standards insure perfect performance.

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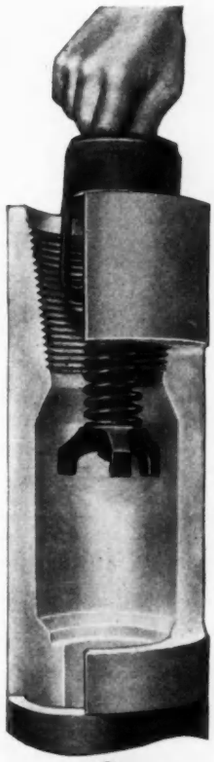
Ask for the descriptive, illustrated bulletin which fully explains the BAKWIK method of safely "floating" drill pipe.



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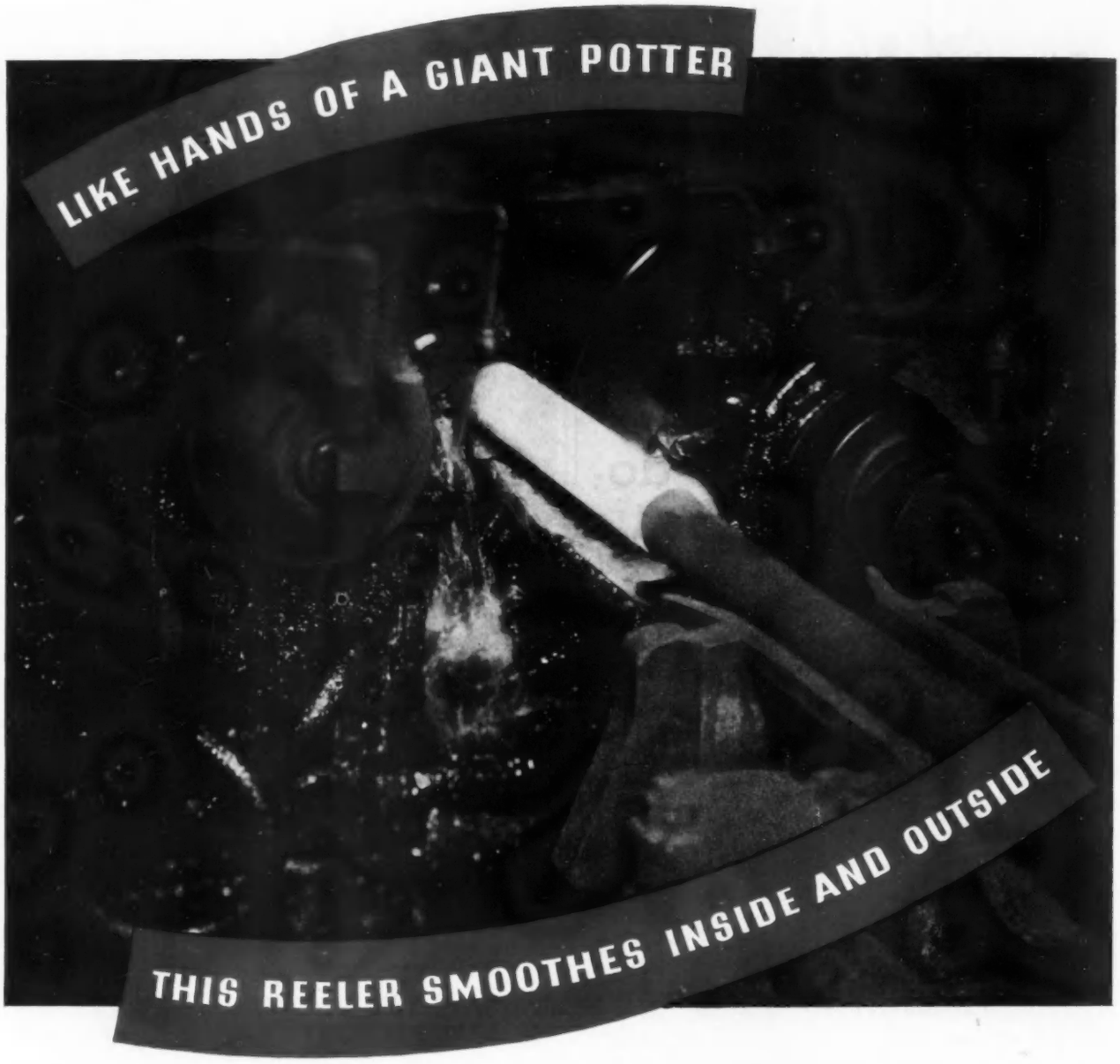

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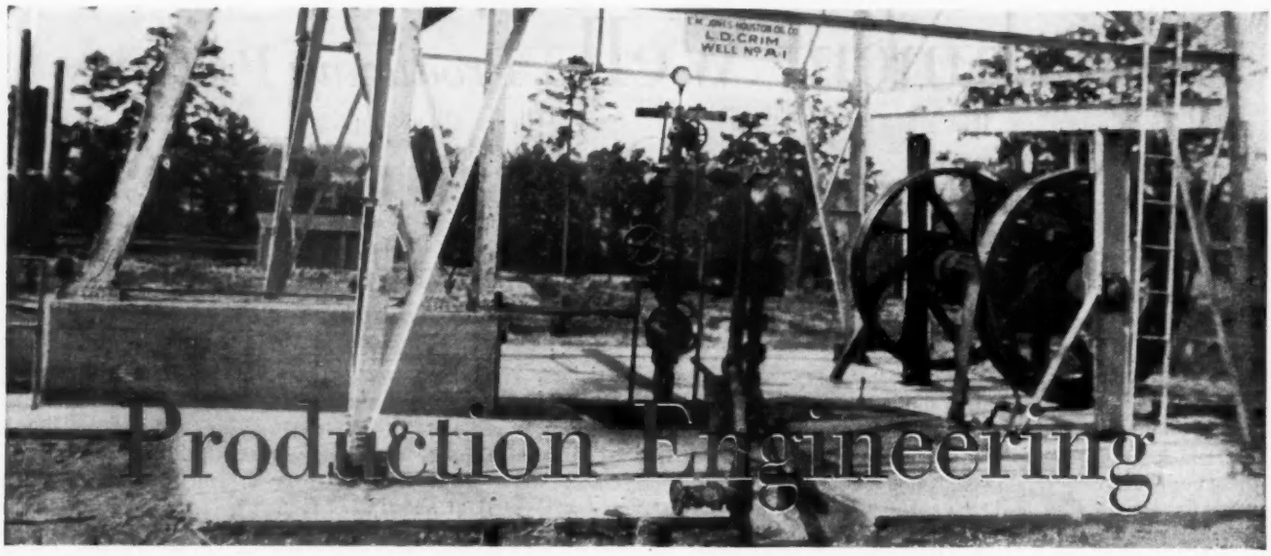


Production Engineering

The Trend in Petroleum Technology

STANLEY HEROLD

CORE SAMPLING, side-wall sampling, electrical coring, water locating, water shut-off, cementing, gun perforating, permeabilities, porosities, bottom-hole pressures, bottom-hole temperatures, well surveys for pressures and temperatures during production, well surveys for direction of hole, directional drilling, multiple hole drilling at one derrick position, reservoir gas-action, gas-lift, drainage radius, percentage recovery, ultimate production, reservoir energy. These, it seems, are the live topics in petroleum technology today. Some of them have been with us for a long time, only to be receiving now a more thorough technical study; others are new, not in theory necessarily, but in specific application to oil field problems. In any event, the study and application of principles involved in these subjects define the profession of petroleum or production engineering.

CONCERNING the principles much has been written in the past; more and better material is to appear in the future by scores of young men who are actively engaged in laboratory or field experimentation at the present moment. The profession is young; the road behind is short, while that ahead is long.

BETTER men are attacking the problems of production today. They are better only because they come to the industry with a more thorough training in the fundamental sciences upon which the recognition and solution of the problems depend. We even find among the newer set of engineers many trained physicists, physical chemists, and mathematicians. They had previously specialized profoundly on many subjects dealing with the physical properties of matter in solid, liquid, and gaseous form; they had studied heat in its effects and in its transformation to mechanical work; they had acquired a knowledge of mathematics beyond the simple operations of addition, subtraction, multiplication, division, and the drawing of statistical curves. From these men we may expect results of industrial importance.

JUST now there is but one subject to hamper these engineers in their progress; namely, the subject of theoretical mechanics. It is the science which unites and correlates all they have learned and will learn about the other sciences applicable to production engineering. It is the science of motion and rest for bodies, whether these bodies be solid, liquid, or gaseous. Migration means the underground motion of fluid from one place to another, accumulation means the underground coming to rest of the fluid in this other place, and production means the motion of the fluid from this place to still another, the latter obviously being a container or conduit provided by us at the surface of the ground. By theoretical mechanics we learn the physical laws pertaining to these three phases in the history of oil, gas, and water; by theoretical mechanics we learn to interpret the behavior of wells and reservoirs; by theoretical mechanics we learn to handle our wells and develop our fields most efficaciously. Now the science of theoretical mechanics is not simple, and the field application of its principles is still less simple. But its study is well worth while, for how otherwise are migration, accumulation, and production to be understood, if not by the only science we have concerning motion, rest, and motion?

Government Wells *Producing Problems Are Overcome by* Operating Practice

JACK TRENCHARD and J. BARNEY WHISENANT
Geologists and Petroleum Engineers, San Antonio, Texas

OPERATING Government Wells field, Duval County, on an economical basis under proration has brought about a number of interesting production problems, many of which have been solved by engineers in that area. The main difficulty is to utilize properly the wells' own pressure in maintaining a flow of 37 barrels a day, while the average potential of the field is that much per hour.

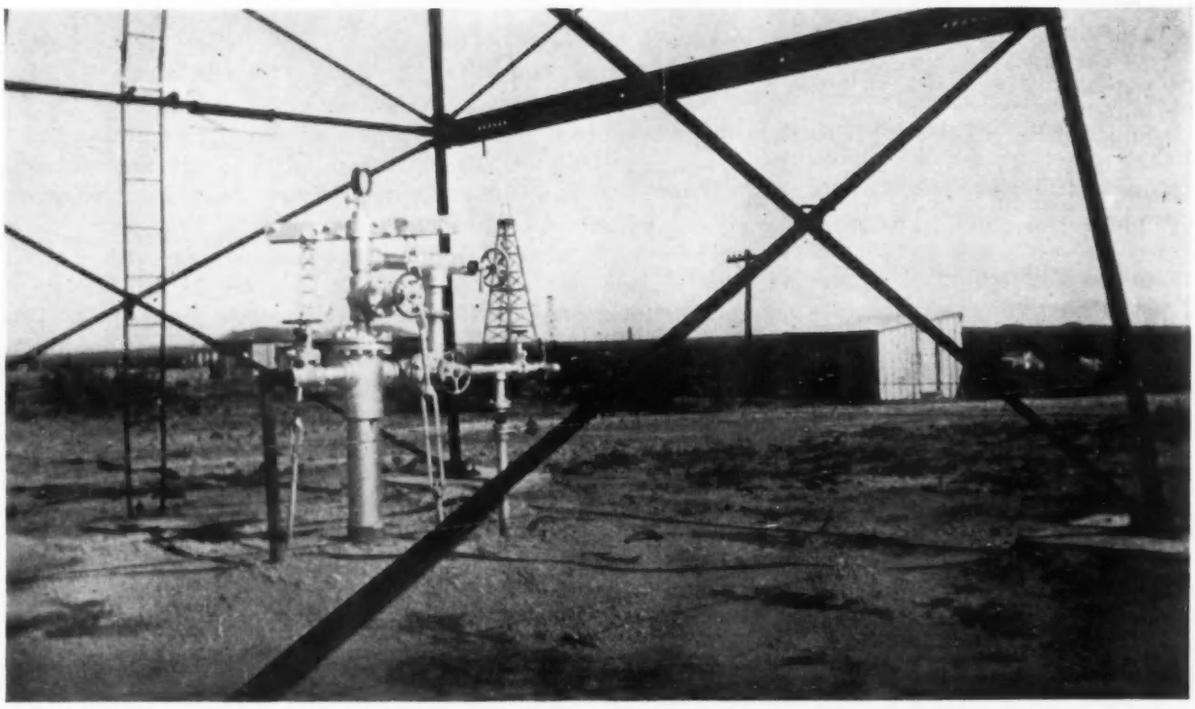
The problem arises as a result of the dissipation of gas in the oil column while the wells are shut in. It is practically impossible to reduce the chokes on the majority of the wells to a size that they will flow only the daily allowable and flow continuously. Consequently, wells must be shut in a larger portion of the time. While shut in, the oil in the regular 2- or 2½-inch tubing becomes dead and the heavy load will not ordinarily start flowing without some severe force "kicking" it off.

To really appreciate the problems and conditions of the field, it is necessary to discuss its history and comparison with other areas in the Mirando or Laredo district, of which this field is a part.

During the past year and a half, the field has developed to such an extent that it may now be classified as a major oil field. Prior to the fall of 1930, the producing area consisted of some 200 to 300 acres commonly referred to as the Old Government Wells field. It was like other fields of the Laredo district, namely, a lenticular proposition with wells showing initials of 50 to 150 barrels, and an estimated ultimate recovery of 8000 to 9000 barrels to the acre. The production was from a sand (now top Government Wells) at about 2250 feet.

In November, 1930, Duval Oil Corporation's Bishop Land & Cattle Company 1 opened the South Government Wells pool. This well showed an initial production of 100 barrels an hour through one-inch choke. Considerable development followed this discovery, the majority of Sections 58 and 135 being developed into production similar to the discovery well. In May, 1932, Suttle et al (later San Diego Oil Corporation), completed Bennett 1, center Survey 44, for an initial flow of 75 barrels an hour on choke, thus opening the north pool. Development since has continued in all directions, the north field being connected to the south area and both being materially extended in every direction.

The type of production is considerably different from other fields in the Mirando district. With the exception of the old field, practically every well completed has been a flowing producer. On the contrary, the majority of wells completed in other portions of the Mirando district



Surface connections on a well in the Government Wells field.

have flowed for a few days only and were then placed on pump. In the south pool wells have been flowing continuously for the past three years. And, it is to be remembered, that only the last half of that time under proration.

Another difference between this field and others in the Mirando area is its size. The field is nearly 10 miles long and has an average width of one mile, a proven acreage in excess of 5500 acres. The average field in the area contains from 300 to 1400 acres and is seldom longer than 2 to 4 miles.

The structural condition present at Government Wells is entirely different from the other fields. It is apparently of an anticlinal character with a closure on the south afforded by a cross-fault. In the earlier stages of the field, it was thought to have been of the monoclinal type, characteristic of the Laredo district, with the closure on the west or up-dip side, caused by either faulting or lensing of the sand. With the development on the north end, in addition to the several tests on the west side, sufficient subsurface data are available to indicate the former type of structure with probably two local highs in the north and south pools.

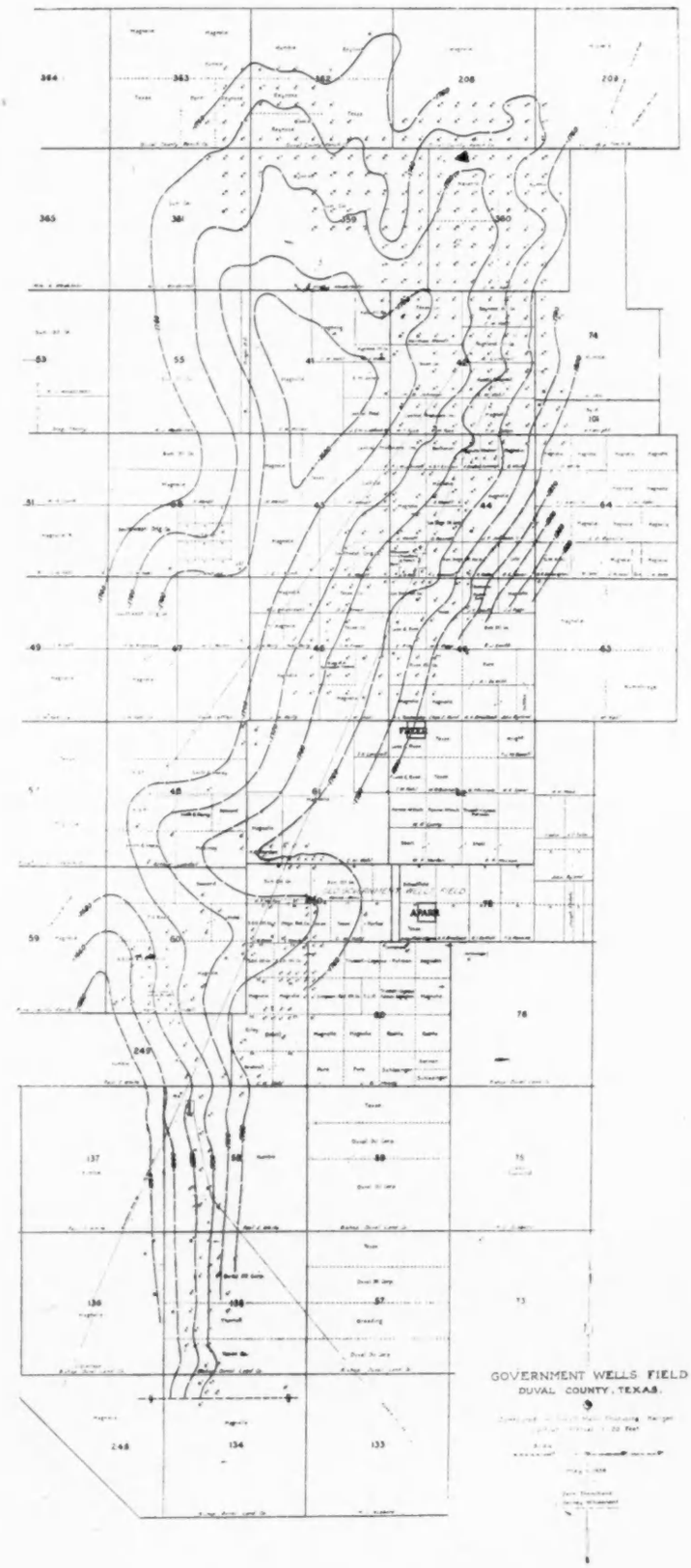
Producing Thickness

Also, the thickness of the producing horizon is considerably greater than in most fields of this district. In the south pool, the pay section consists of two or three sand bodies separated in some instances by several feet of brown shale. These sand members are lenticular in local areas so that different wells will not have exactly the same thickness of sand. The north field, however, has generally one continuous body of sand, ranging up to 50 feet in thickness. An upper producing horizon 25 to 30 feet above the main sand is present on the east side of the north pool and is commercially productive in Sections 44 and 46. This sand lenses out to the west and is not present beyond the east central portion of the field.

These conditions increase the importance of the field and are the keys for the extensive amount of wildcat exploratory work in this region, which is an attempt to discover a similar producing area.

In general, the Government Wells sand is encountered 2300 feet below the surface and in turn 700 feet below the top of the Cole sand horizon, or approximately 700 to 800 feet below the top of the Jackson of the ocene age. The surface beds belong to the Gueydan series of the Oligocene age.

The pay horizon consists of a soft, loose, medium-grained sand and is char-



Typical gas lift connections used at Government Wells. Seven-inch swedged on top to connect with four-inch control head.

acterized by the fact that it is cored or drilled with a fish tail bit. It is so loose and unconsolidated that extreme care must be taken when coring so as not to drill too deeply. Many wells in the field have prematurely produced water due to the peneration of too much sand or drilling themselves deeper after completed. It is almost impossible to make an edge water map of the field due to the fact that several wells scattered throughout the field, both high and low on the structure, are producing some water. The original edge water line was on the 1780-foot contour.

The wells are completed usually by cementing 6⅝-inch casing on top of the producing sand, using 5 3/16-inch shop perforated liner on bottom. In many instances a back pressure valve is used in the bottom of the liner to prevent heaving of the sand. In the early stages of development, the wells were swabbed in through the casing or two-inch tubing, after circulating with clear water. With sufficient gas pressure developed from various wells, the common practice is to "rock" the wells in. Upon final completion, the wells are flowed on ⅛- to ¼-inch chokes with the tubing pressure averaging from 75 to 200 pounds and the casing pressure running up to 800 pounds.

Production problems arose with the advent of proration. In July, 1932, the allowable was 150 barrels per well, but in April, 1934, it was only 37 barrels per well, and at one time was considerably below this figure. It was found that those wells not located on the extreme western side of the field, where the gas pressure is the greatest, would not flow through two-inch tubing at less than four barrels per hour. This, of course, forced the employment of methods to produce steadily or periodically on the low daily allowable.

In putting wells back on production after shutting them in, the common practice, at first, was to either swab or rock them in. Continuous use of these methods proved very injurious, due to the sands heaving into the hole, eventually causing water to break in.

Three methods are now generally used, they being, namely, pumping, flow valves, and tapered tubing. Each are meeting with considerable success.

A number of leases have been equipped with power plants and each well rigged up with a pumping rig. The wells are agitated by the pump to commence flowing. The expense of this equipment is overcome by the fact that the investment will be necessary at such time as the field goes onto pump regularly. The present condition of the field, however, indicates that it will be considerable time before the field stops flowing.

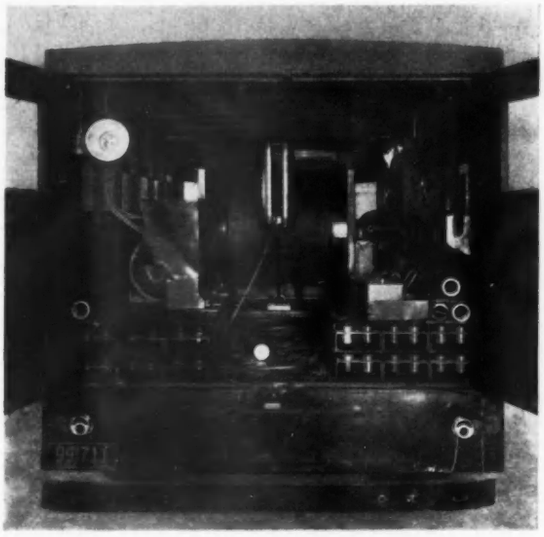
The second method is through the use of flow valves. A special type invented by an operator in the field and originally introduced there, is proving unusually practical. About 50 wells have been equipped with this and similar devices designed for handling the heavy oil (20 to 24 gravity). These valves are set in the regular tubing string every 250 to 300 feet with a bottom-hole choke being installed about 200 feet off bottom. The choke ordinarily is from one fourth- to one half-inch in size. The injection of a limited amount of gas causes the oil to start rolling, inasmuch as these valves keep the oil within the tubing constantly alive.

The third method is through a string of tapered tubing. This practice has been confined almost entirely to the northern producing area where it has proven highly successful. The tapered tubing ordinarily consists of one half the string being ¾-inch pipe and the other half of one-inch, the larger pipe being used on the bottom. The use of tapered tubing has a dual advantage. First, a more continuous flow is obtained and second, it can be kicked off with a small amount of gas. Several types and sizes of tapered tubing have been used, ranging down to one half-inch, but the above mentioned sizes are the most common.

During January, 1934, The Texas Company made several flow tests on the Freer and Johnson leases in the north

Typical type rig used for drilling at Government Wells.

Increase Your Production



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field and found that the minimum daily average from 10 wells flowing steadily on tapered tubing was 58.5 barrels per well.

Oil-Gas Ratios

Gas-oil ratios have been a matter of interest in the field, although there have been only a few cases where there has been an excess of gas per barrel under th railroad commission rulings. The allowable is 1250 cubic feet per barrel. The amount of gas produced is very low, except on the west side, or gas-oil edge of the structure. The gas-oil ratio of the south pool, in general, ranges upward from 400 cubic feet and in the north pool ratios as low as 80 have been measured.

It is interesting to note that in several instances wells lower on the structure have higher ratios than other farther up dip. This is due to lensing within the sand bodies. In general, however, the increase is from east to west.

The practice has been to adjust the tubing at a level permitting the greatest amount of oil to flow with the least wastage of gas and to use choke sizes that will further reduce the gas-oil ratio.

It is rather difficult to arrive at the open flow possibilities of the field as operators are opposed in most cases to fully opening their wells, thus reducing the back pressure on the oil sand and allowing possible heaving. This would in all probability result in intrusion of water much quicker. The potential of the field, based on one half-inch chokes and through tubing, is estimated at 35 barrels per hour.

The Texas Company's Wendt, Freer and Johnson leases in the north pool showed an average of 60 barrels an hour through one-inch chokes on two-inch tubing. Some of the wells were rated as high as 109 barrels per hour.

Prior to March, 1934, not many wells were tested for bottom-hole pressure. However, during that month, key wells throughout the field were tested by the engineering staff of the Texas Railroad Commission. Of 68 wells measured, the average was 721 pounds. In the new portions of the field, such as Sections 359, 361, 362 and 363 in the north pool and 60 in the south pool, pressures from 800 pounds to 850 pounds were recorded. It is estimated that the pressure of the wells drilled from one to two years ago were between 800 and 850 pounds, hence it is apparent that the loss during that two-year period has not exceeded 125 pounds.

Proper production methods through the maintaining of steady top pressures on the various flowing wells and continued conservative running of oil is expected to check any rapid decline in bottom-hole pressure. The bottom-hole pressure, being the pressure of the fluid as it enters the hole, is an important gauge on the length of time the field will flow and has a bearing on the probable recovery.

Porosity of the sand and its thickness also is an important measure of the field's ultimate recovery. The average porosity of the sand, according to laboratory tests, is 26 percent and the average thickness is probably 20 feet. If 40 percent is considered an adequate figure for the determining of recovery, then the ultimate recovery would be 16,175 barrels per acre. Due to poor development and handling of producing wells in certain areas, the hazard factor of 15 percent seems fair, which would give an average recovery of more than 13,000 barrels per acre. Figuring that 5500 acres already are producing, the field's present outlook is in excess of 50,000,000 barrels total recovery. It is to be expected that some portions of the field will produce as high as 17,500 barrels per acre, and possibly higher.

The recovery of the majority of the oil, possibly 80 percent, will be through flowing methods, unless some unforeseen happening causes the heavy gas reserve to be dissipated at an unusual rate. All acreage within the 1680-foot contour and the major portion of the area within the 1700-foot contour is considered gas. In the north field, this covers Section 41 and the northwestern portion of Section 43, or around 800 acres. Another gas zone in the south field is on the west flank of that producing zone. Still another is looming up at the extreme north end of the present south field, oil production and southwest of the north field's production. The Cole sand, 1550 to 1660 feet, produces gas on a large portion of the present proven area of the regular horizon. These gas sands provide a sufficient reserve for the maintenance of jets, lifts, flowing devices of various kinds, as well as provide a possible means for the complete repressuring of the entire field.

Generally speaking, everything within the 1740-foot contour is flowing. A few exceptions to this case may be found. It will be noted, however, that there are a number of wells in the flowing area with pumping equipment rigged up, but these wells are so arranged for the purpose of agitation and generally will "kick off" after the pump has been run several times.

Water supply is a major problem at Government Wells. This system gets supply from a shallow well.

Reproduction of micrograph above shows the interlocking of the flakes of the internal reinforcement used by Barrett. By laminating with the waterproofing agent they give Barrett Pipe Enamels unusual toughness and resistance to soil stresses.

For pipe of large diameter The Barrett Company will furnish equipment required to revolve pipe and spread enamel

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Defying Climate, Earth Acids and Electrolysis

Corrosion and electrolysis quickly age and destroy an unprotected pipe line. Barrett Specification Pipe Line Enamels provide a lasting film of protection which is a non-conductor of electricity . . . a tough strong coating immune to moisture and earth acids. They are the result of eighty years of experience in waterproofing and the development and application of coal-tar protective coatings. The Barrett Technical Staff and Barrett Field Engineers will gladly cooperate with you on any pipe-line protection problem. 'Phone, wire or write.

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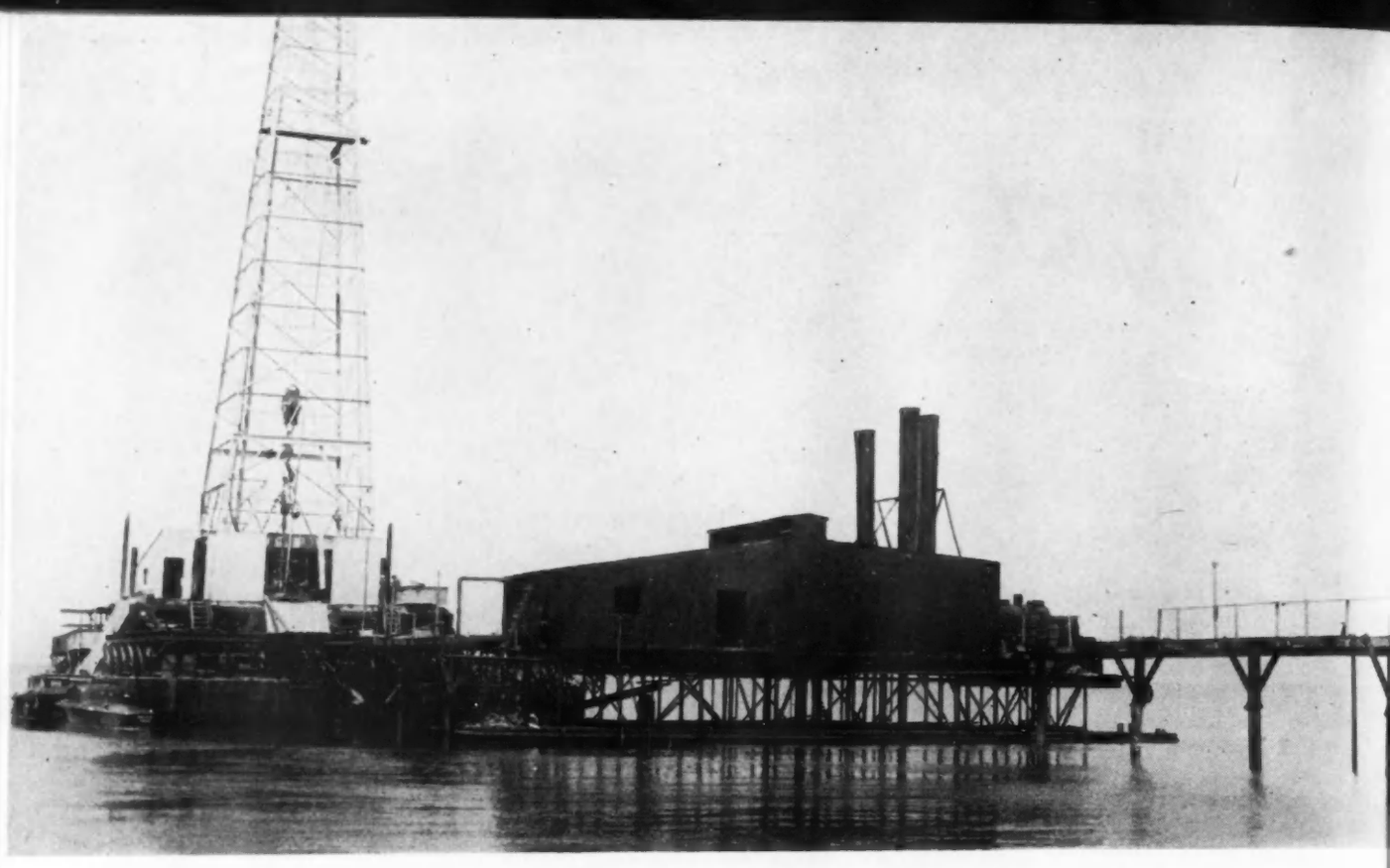
Barrett Specification

PIPE LINE ENAMELS



Drilling and boiler barges being used to drill The Texas Company's State-Lake Barre 28D. They are resting on bottom in shallow water.

Barges *That Submerge in Shallow Louisiana Lakes* Solve Swamp Drilling Problem

BRAD MILLS
Staff Representative

USE of heavy steel barges which may be submerged and floated at will and which carry full rotary drilling outfits have facilitated The Texas Company's field operations along the coastal area in Terrebonne and La Fourche Parishes. Development costs have been lowered through construction of these patented barges, while drilling operations may be started in a fraction of the time required where conventional piling type piers are used.

An interesting feature of this floating-sinking barge is that it carries permanently all equipment necessary for drilling to 8000 or 9000 feet. Drilling on floating barges is not a new practice, but use of a large barge that may be towed into position, sunk and made the full well foundation is a new development.

Feasibility of such drilling operations depend upon several factors. Lake and bay bottoms along the coastal area are usually almost level, and it has not been necessary to do more than sink the barge and start drilling operations.

Nine salt domes along the coast in Terrebonne, La Fourche and Plaquemines Parishes are ideally suited to this type of drilling. They are almost totally or partially covered by water and barges may be towed into position with little effort and expense. The water is shallow and the bottom of the lakes and bayous are nearly level.

The Texas Company conceived the idea of barge development some time ago and foresaw the possibilities and advantages of using submersible barges in its operations in the lakes and bayous along the Louisiana coast. During an investigation of the subject, United States Patent No. 1,681,533 issued to Louis Giliasso was found and after carefully considering the scope of this patent The Texas Company secured an exclusive license from the patentee.

Louis Giliasso, who is a licensed sea captain, invented the submersible drilling barge after he had observed and studied drilling operations in Venezuela where several wells were being drilled in the comparatively shallow waters with the derricks and other equipment mounted on piling. The first submersible barge, "The Giliasso," which was built by The Texas Company under its license embodies substantially all of the features covered in the aforementioned patent.

The large size barge in use in drilling State Lake Barre No. 28D in the Lake Barre field, carries full equipment, including a 122-foot steel derrick. It is made in two sections, and is of all-steel, all-welded construction. The

dimensions of the barge, taken as a unit are 56 by 110 by 10 feet, the first two figures representing the width and length, and the last being the depth of the hulls. Each section of the barge is 24 by 110 by 10 feet, with an eight-foot separation between them. Thickness of the non-corrosive copper bearing steel is five sixteenths of an inch. Each of the hulls has seven compartments, all being equipped with special sea cocks for sinking operations.

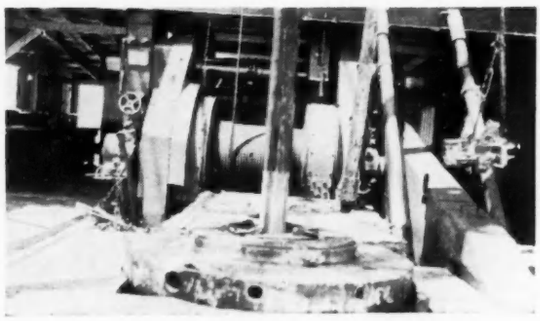
The reserve pit for rotary mud is built into one end of the barge. The two hulls are tied together across the top with heavy structural steel. The entire superstructure serves as a form of truss-work to make the two barges one common unit. The structural steel foundation that supports the derrick is itself a strong supporting medium between the two barge sections. The main mud pit is located on one end of one barge section and is nothing more than a steel box 18 feet square and five feet deep. The slush pumps are located on the corresponding end of the other hull and are in a similar, but larger steel box. They rest on a level with the barge deck.

The barge is constructed so that if the well is a producer and it is necessary to "back away" and leave a Christmas tree, moving backward is possible by removing only two steel cross beams and one A-beam.

The all-steel super-structure elevates the derrick floor 11 feet above the deck of the barge proper. The casing rack covers about 40 percent of the area of both barge sections. It is of steel construction and stands six feet above the barge decks. The mud ditch is quarter-inch steel plate, 125 feet long, and designed for various rates of mud flow into the slush pit.

The superstructure supporting the derrick and drilling equipment is braced with heavy H- and I-beams, concentration of this bracing being under each derrick leg. Bracing under the engine and draw works platform is strong enough to make vibration negligible even at highest speeds.

Engine and mud pit end of the barge. Steel mud flume is shown in the center.

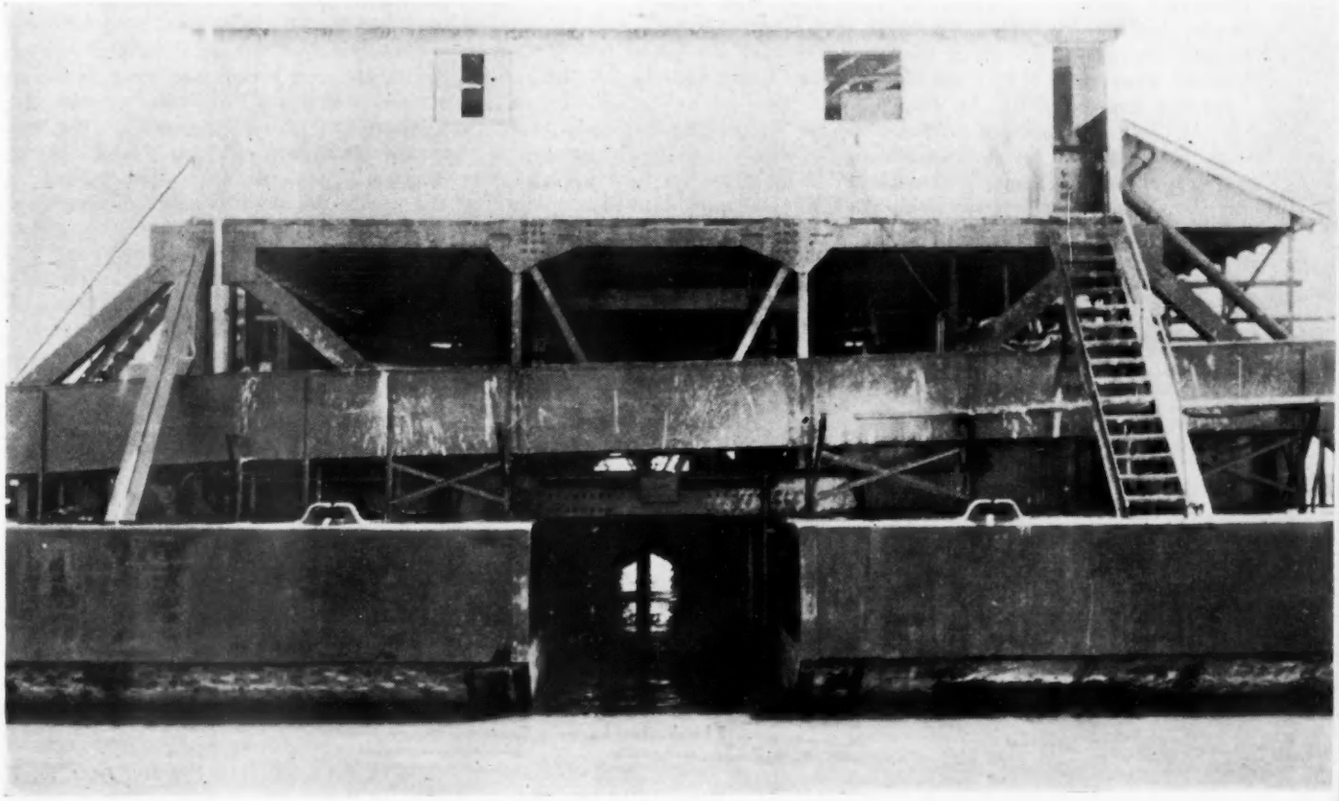


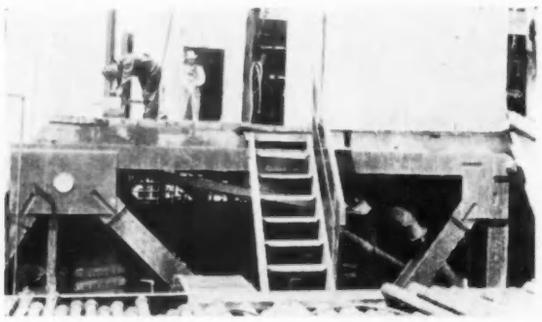
Ample room on the barge for normal drilling operations. Note large work room in rear.

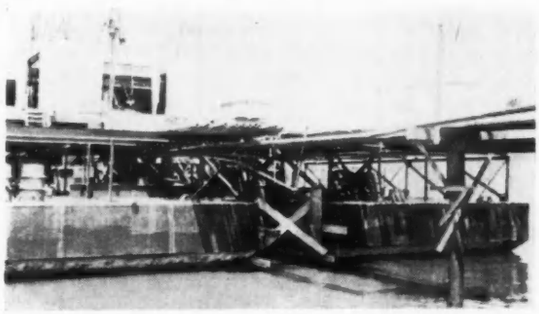
The rat hole opening passes through one of the barge hulls. Each hull also has openings for spuds that are used to anchor the barges at location while it is being sunk.

The barge is floated and moved with ease, despite weight and equipment carried. A centrifugal pump is used to remove water from the sunken barge. This gives a fast and powerful hookup, and water is pumped out in a short time. Six-inch pipe and connections are built into the barge. In sinking the barge for drilling State Lake Barre 28D, not more than five feet of water had to be considered. This gave a considerable depth margin, as it would not be difficult to drill in 12 or 13 feet of water. It is 15 feet from the bottom of the barge hulls to the top of the pump and slush pit compartment, so making allowance for wind and waves. Water depths of 12 and 13 feet can easily be handled.

A comparison of piling required to drill the conventional water location in this district with the number necessary where this type steel barge is used shows a big saving in time and effort. It formerly required 260 piles to complete a well location for drilling operations,







At left is shown bracing under derrick legs. At right is the casing end of the barge. Removal of a few wood piling and a steel beam permits "backing off" when a Christmas tree is left after completion.

while only 16 piles are driven before drilling starts from the floating-sinking type of barge. These piles are largely incidental to drilling operations and include a few for walks and platforms to the boiler barge, and a similar number driven between the barge hulls as a precaution against damage to casinghead in the process of moving.

The boilers rest on a separate and smaller barge. It is of a different construction type, but it is also sunk after being towed into position. This barge is of all-steel welded construction and is 28 by 84 by 6 feet deep with a 10-foot structure above barge deck. The super-structure on this barge which becomes the boiler foundation, is made of structural steel. The Texas Company used this type barge for some time prior to use of the heavier patented barge with which drilling is now done. The boiler barge is towed into position and sunk as a separate operation after position of the drilling barge has been determined. This type barge could as well be used for other operations as for drilling purposes. Where the water is shallow and quiet the top of the barge may be used for storing miscellaneous supplies.

In breaking the boiler barge away from the drilling barge, it is necessary to break only two four-inch unions on the steam lines. The barge when ready for removal draws less than two feet of water.

The size of the drilling barge permits use of heavy rotary equipment. The 122-foot derrick is one of the heaviest ever used on the Gulf Coast. Two 14 by 7¼ by 18 slush pumps serve a double purpose, circulating the mud and assisting the centrifugal pump to empty the barge of water before floating. Late model 12 by 12 twin type drilling engine, heavy draw works, and 26-inch rotary table are a part of the equipment. Such equipment as traveling and crown blocks, hook, chain, weight indicator, tongs, hose, wire lines, bits and coring equipment are heavy standard models of late type. Three 125-horsepower boilers are used.

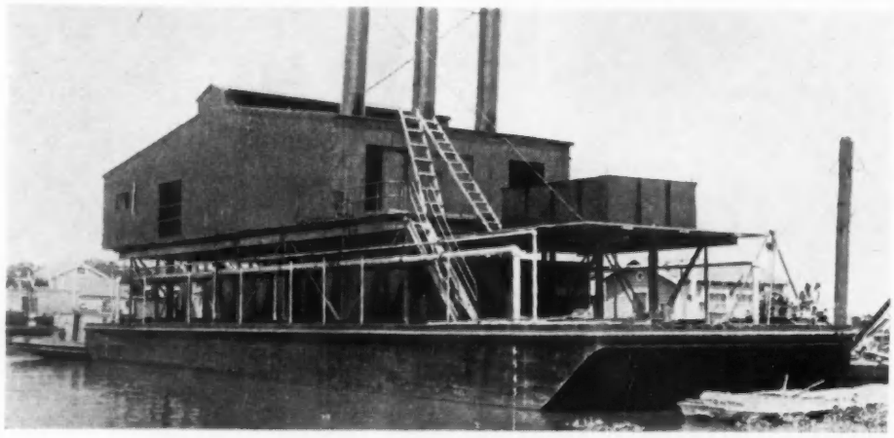
The engine house and tool room occupies one full end of the elevation on a level with the derrick floor. It is of sheet metal construction, is fully enclosed, and affords ample room for work and shelter. Arrangements of this room gives more space than is ordinarily provided for most land locations.

A major operating problem in this district is lack of a suitable supply of fresh water. All steam is condensed to reduce water requirements.

The heavy steel barge now being used to drill State Barre No. 28D was first placed in operation in December, 1933. This barge was used in drilling two wells at Lake Pelto to 5700 feet upon completion of which it was moved to Lake Barre where it is now on its fourth well. The longest total time from finishing one well and spudding in on the next was 30 hours. The shortest total time for the same operation was six hours.

This twin hull barge operated so successfully that two more such sets are now being built. A similar but somewhat smaller barge has recently been completed and placed in operation at Four Isle Dome.

These submersible drilling barges are built under contract, and when turned over to The Texas Company, are ready for installation of drilling equipment. The barge units, steel superstructure, and all heavy steel work is completed by the barge manufacturer. The barges then are towed to the company's warehouse near Houma and all equipment installed.



The boiler barge afloat.

Oil wells in central portion of Clay Creek field, with combination field office and warehouse shown at right, and residences of employes at left.

Efficiency and Safety Mark Clay Creek Field Operations

JACK LOGAN

INGENUITY which devises better and safer ways to do things, and efficiency which is on the alert to provide effective results economically . . . . These are among the impressions that come most forcibly to mind in looking over the production operations of Sun Oil Company in the one-company-controlled Clay Creek salt dome type oil field in Washington County, 12 miles north of Brenham, Texas.

In all operations in the field safety for workers, as well as economies and efficiencies for the company, is stressed, and the workers were proud of the fact they had gone two years without a lost-time accident, when a spider bite took a man out for a day and made it necessary to start over in building up a long time safety record. Ten months have accumulated on the new record.

By virtue of concentration of leases within one company's hands the six-year-old field is being developed conservatively and unhurriedly, and two drilling wells represent the extent of new work at present; while production operations involve handling of 29 wells, prorated currently to an aggregate of 700 barrels oil output daily. The production is mostly about 25 gravity oil, and the wells commonly range in depth from 1200 to 1300 feet, although some oil has come from greater depths.

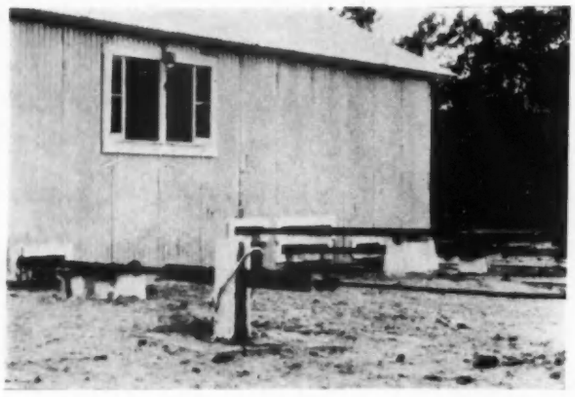
Flowing Wells

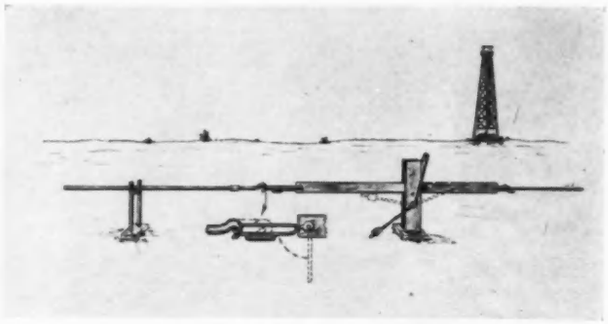
The 29 producing wells at Clay Creek include three that are flowing and 26 which are pumping. Among the three flowing wells is one, on the Caraway lease, which has been flowing for about four years and still has considerable pressure. The other two are relatively new producers, located on the Janner lease, which when closed in show pressures of around 300 pounds. These flowing wells are equipped with Christmas trees tested for high pressures, although the hookups are simple and small. Pumping type steel derricks have replaced drilling derricks over the flowing wells in anticipation of cessation of flow. The need for high-pressure well head equipment on completed wells, as well as for good blowout preventers on drilling wells, has been demonstrated by the fact that there were several serious blowouts and one instance of a well cratering in the earlier stages of the field's development.

Pumping Wells

The 26 pumping wells of the field include one on an isolated location handled with a gas engine and portable pulling machine, and two on another edge locality operated with rods pulling against each other from a standard rig employing a gas engine for power. The remaining pumping wells are handled with two central power installations, the maximum distance of a well from a power being a little over one half mile. The central powers are run by electric motors.

At the central powers at Clay Creek an interesting safety feature has been worked out, reducing greatly the hazard of injury to the hands in connecting and disconnecting pull rods from the band wheel. The plan dispenses with the customary method of hooking the rod, on the incoming stroke, to an anchor rod outside the band wheel house; and then on the outward stroke disconnecting the rod leading off from the power source; all by hand. Instead, the connection between pull rod and the rod connecting with the band wheel is by means of a flat length of steel, containing hook-like grooves, which slides back and forth through slots cut in the top of a steel casing anchored in a concrete block, and which has in connection with it a hand operated lever. The lever is thrown when





View of one of the specially designed rod line hook-offs used by Sun Oil Company as a measure of safety for workers in pumping wells off central powers at Clay Creek.

the rod has completed the inbound stroke, the steel connecting piece is caught, and the rod line is held to the anchor; and as the rod connecting with the power reverses its motion, that is, goes outward, it is disconnected from the pull rod line.

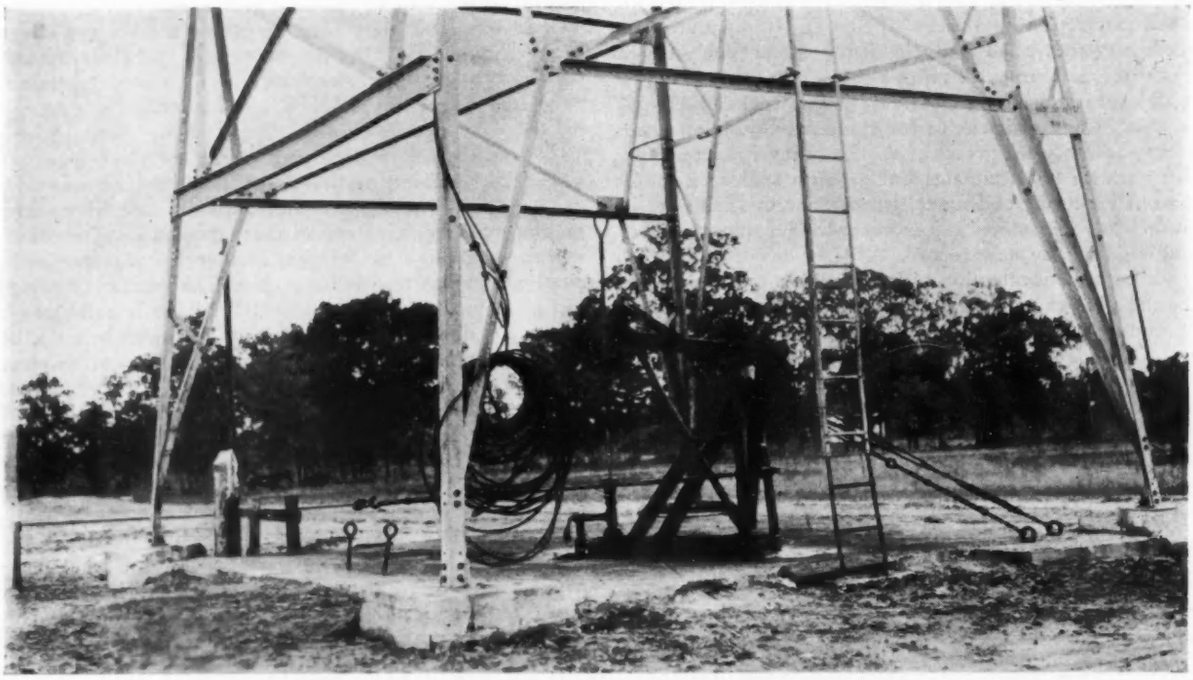
At the wells that pump off, various kinds of jacks are used, and while the pumping derricks are all steel, they range in height from 59 to 96 feet, including some 66 and 87 feet high. In all cases the derricks are on concrete foundations, and derrick floors are concreted, making the wells neat in appearance. When the concrete for the floor is poured, the derrick ladders, ordinarily left swinging several feet above the ground, are extended into the concrete by bolting an extra section to the bottom of the ladder. Thus the ladder is firm and solid all the way to the bottom, and danger of derrickmen falling because of a swinging or moving ladder bottom is eliminated.

To facilitate the pulling of rods from pumping wells, wire lines are kept strung up, ready for use, in all the derricks. A tractor, with a winch built specially onto it, is used in handling the rods.

Treating Oil

On two of the Clay Creek leases heating systems, built in the field, are employed successfully for treating cut oil They both involve use of natural gas, coming off casing heads of wells, in field-made heaters. The oil line, swedged up to larger size for giving greater heating surface, passes through the heater, and when the fluid is heated to 150 to 160° F., the oil and water separate satisfactorily. In one case (on the Caraway lease) the production of the wells goes to a gun barrel, then gravitates from the gun barrel, through the heating system, and into the stock tanks. In another case the oil goes first to a tank, then through the heating system. The gas in the field is not poisonous and it rises readily into the air, obviating any necessity for burning it in flares.

While the oil from the above leases is successfully



Typical view of a Clay Creek well pumping from a central power.

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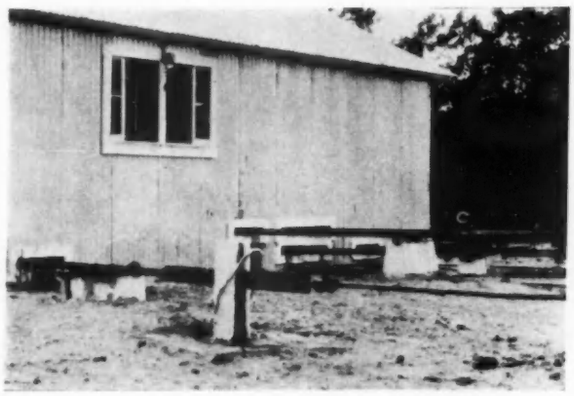

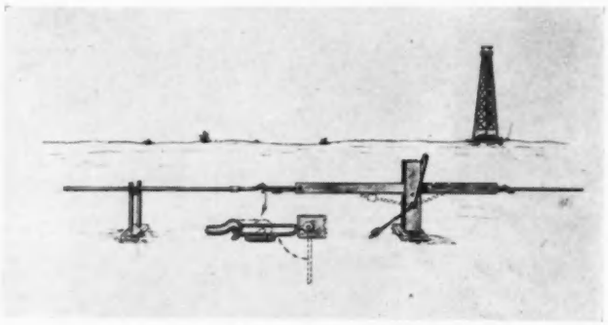

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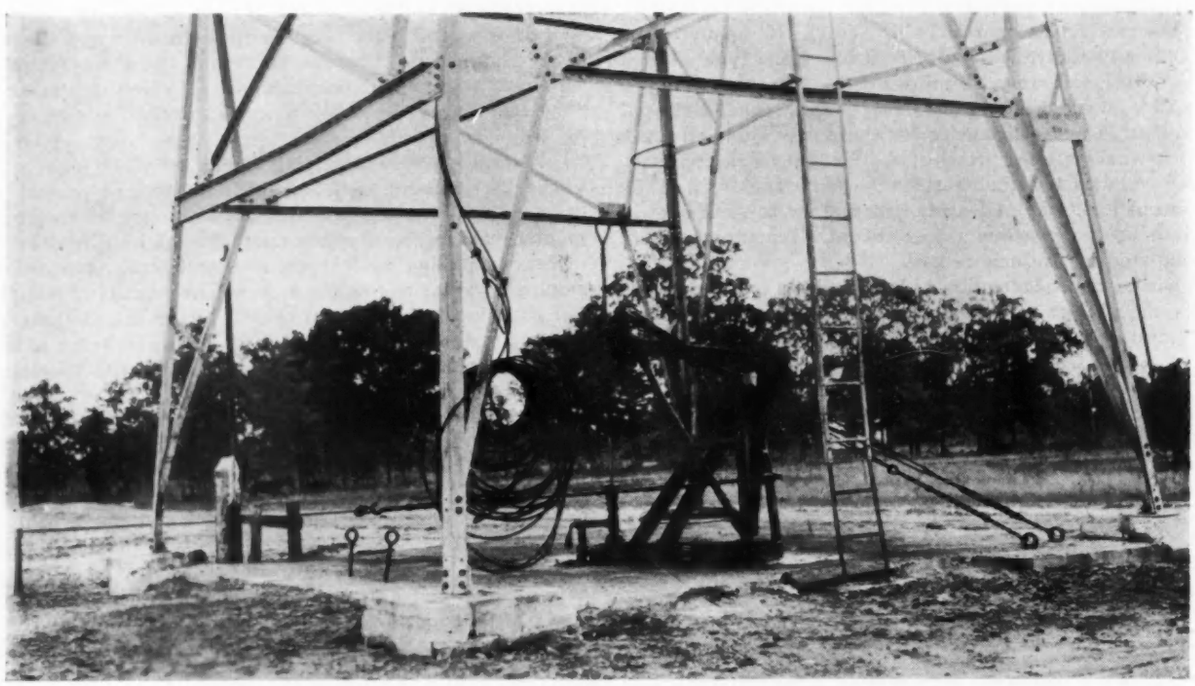

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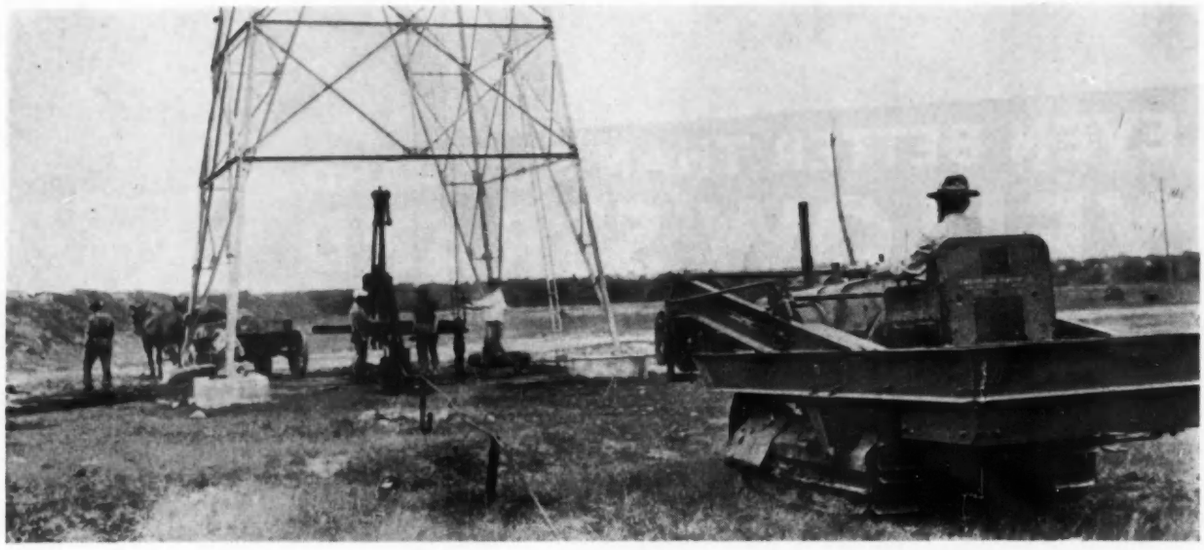


Rod-pulling job at a Clay Creek well nears completion. For handling the rods a winch has been built especially onto the tractor.

treated by the simple heating systems, that from some other leases does not respond to such treatment, and the company has installed a central, electric dehydrating plant for treating such oil. It is located on the G. F. Grote farm. By means of drainage pipes and ditches, the plant is kept remarkably neat and free of fire hazards, no waste oil or water being allowed to accumulate around the dehydrator or around the tanks used in the system.

The field is capable of producing considerably more than its 700-barrel daily allowable, and so the wells are produced only part time. Production operations are carried on with workers on duty six hours daily, in conformity with oil code work-hours provisions.

While one of the drilling wells is active 24 hours a day, four shifts being employed, the other is being drilled by only one crew, working six hours per day.

One of these wells is unusual in that it is exploring below the regular shallow producing horizon. Progress has been exceptionally slow due to hard formations found below 2200 feet. In reaching 3600 feet about four months were spent, the greater part having been consumed in the hard formations below 2200 feet. The well has been cored most of the way down, and a great number of hard formation cutting bits have been required. So much time has been involved on the test that the company has placed housing over the two boilers used for supplying steam as well as over the drilling engine and draw works.

Market outlet for Clay Creek production is furnished by a four-inch line extending eight miles to a railroad loading rack at Gay Hill, on the Santa Fe railroad about midway between Brenham and Somerville. The pumping station used in connection with the line is located in the field, and consists of a pump driven by an electric motor.

Salt Dome Field

The Clay Creek salt dome was discovered by W. B. Ferguson in July, 1926, while mapping surface geology for Sun Oil Company, and the company immediately assembled a lease block covering the structure. It drilled five core tests in the latter part of 1927, and the following summer abandoned its first deep test, Schirmer 1, which had no commercial oil showings, at 4271 feet. The second deep test, G. F. Grote 1, was completed about October 10, 1928, as the discovery well, flowing 125 barrels 25 gravity oil daily from sand at 1140-1154 feet. A month later the second well on the Grote lease was completed, flowing 4200 barrels oil daily from 1345 feet.

In addition to the 29 present productive wells in the field, about one half dozen others have been completed as oil producers, but have since been abandoned; and in the course of development of the area about 20 unproductive tests have been drilled. The deepest hole in the field was Janner 4, western edge test, abandoned in February, 1931, at 5517 feet in salt, which had been entered at 3865 feet.

The Clay Creek dome is manifested by abnormal structural conditions present within a circular area about three miles in diameter, situated in the southern half of the James F. Perry Survey and the northern half of the Nestor Clay Survey and to a limited extent in adjacent surveys to the west and east. Within that area beds of Catahoula (Oligocene) age have been pushed up through the surrounding Oakville formation of lower Miocene age; while near the center of the domal uplift a limited amount of the still older, Jackson formation, of Eocene age, is exposed at the surface, having been pushed up through the Catahoula. There is also a circular area, about one mile in diameter, in the central portion of the uplift, where the Oakville formation remains; the structure being one with its top folded or slumped down. Near the center of the structure there is also a fault manifested at the surface.

Drilling has indicated that a salt plug has risen within about 3000 feet of the surface, and that the salt is covered with cap rock, which near the center of the dome is as much as 1200 feet thick. The oil production comes from sands of Cook Mountain, Mount Selman, and Wilcox age (Eocene Tertiary), lying over the rock-capped salt, being found in "highs" on the lips of the central basin which is reflected by the mentioned Oakville inlier. A comprehensive geological discussion of Clay Creek field appeared in the 1931 Yearbook of the National Oil Scouts Association of America.

The field is along the northern edge of the salt dome province which lies along the coasts of Texas and Louisiana, and the Clay Creek producing formations are the oldest which contribute to the salt dome region's petroleum output.

Development of Technical Education *for the* Petroleum Industry

H. C. GEORGE*

Head, Department of Oil and Gas Production, University of Pittsburgh

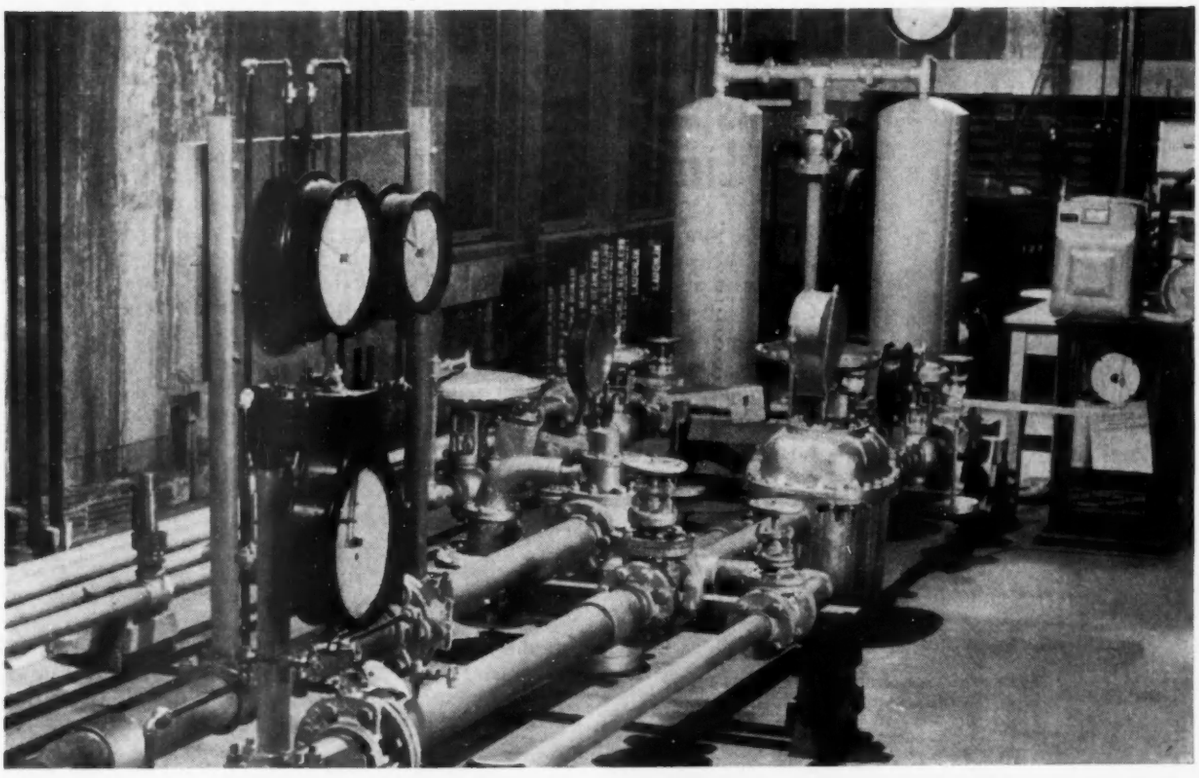
IN 1901, the United States produced 69 million barrels of crude oil, which was 41.4 percent of the world production. By 1931, these figures were 850 million barrels and 62.1 percent respectively, showing over this period of 30 years an increase in the world production of 718 percent. Over this same period, the increase in the demand for technically trained men in the industry was much greater than the increase in crude oil production. This was because much of the increase in production was secured by the application of geology and physics to the finding of new oil fields and by the development of engineering methods and equipment incident to drilling and producing from much greater depths.

The growth of the petroleum industry was coincident with and chiefly due to the rapid development of the automotive industry, with the resultant great increase in the demand for gasoline, lubricants, and other petroleum products. These conditions produced an additional demand within the petroleum industry for men technically trained to handle the problems of transportation, storage, and refining.

During the first decade of the present century, the growing demand for scientists and engineers in the petroleum industry was met by increasing numbers of college graduates from the old established courses in chemistry, geology, and engineering. However, a need began to be felt for scientists and engineers specially trained for the petroleum industry. In 1912 the University of Pittsburgh established the first department in any university in the world that offered major work in petroleum geology and petroleum engineering. Other American universities entered the field in the following order: University of California 1915, Stanford University 1915, West Virginia University 1916, Colorado School of Mines 1921, Missouri School of Mines 1922, University of Kansas 1924, Louisiana State University 1924, University of Oklahoma 1924, Pennsylvania State College 1928, University of Texas 1928, University of Tulsa 1928, University of Southern California 1929, and Texas A. & M. College 1929.

With reference to progress of petroleum education in Europe, I quote from a personal letter from A. Beeby Thompson as follows: "So far as England is concerned, the

*Read before the annual meeting, A.I.M.E., New York, February, 1934.



New Natural Gas Laboratory of the Oil and Gas Department, University of Pittsburgh, Pittsburgh, Pennsylvania

first petroleum course was started at Birmingham University in 1913 and in 1920 this department was liberally endowed by several large British oil companies. A few years later a petroleum course was started at the Imperial College of Science, School of Mines, South Kensington, London, and continued during the World War period. These are the only two universities in Britain where special petroleum training is arranged. On the Continent, so far as I am aware, there are no specially organized full petroleum courses, although in Imperial Russia, Poland, and Rumania petroleum subjects are incorporated in the curricula of the universities. The geological courses embrace the geology of petroleum in some countries where oil fields exist, and in chemistry the natural hydrocarbons and their treatment are a part of the regular study. Prior to 1915 I believe the only European country which could boast a regular petroleum course was England."

From 1904 to 1915, several American colleges and universities incorporated as part of some of the courses in chemistry, geology, and engineering, information dealing with the petroleum industry, without including the word petroleum in the name of the course. From 1904 to 1907, I gave instruction in petroleum production as part of the course in mining engineering at the University of Pittsburgh. The University of Oklahoma gave instruction in petroleum geology as early as 1907, as part of the regular curriculum in geology, and Chicago University gave instruction in petroleum geology as early as 1913. The University of California included, as part of the mining course, instruction in petroleum development and production beginning in 1911.

During the period from 1910 to 1920, some chemists, geologists, and engineers who were teachers or were in state or federal government service or in the employ of oil or gas companies, gave lectures dealing with the oil and gas industries at some of our American colleges and universities. In this group I have in mind such men as Ralph Arnold, F. G. Clapp, V. R. Garfias, Charles N. Gould, Roswell H. Johnson, J. O. Lewis, L. C. Snider, and S. S. Wyer. The work of these men during this period and the interest developed by the U. S. Geological Survey and the U. S. Bureau of Mines in petroleum and natural gas technology were important factors in the development of higher education for the benefit of the petroleum and natural gas industries.

Beginning in 1910 the University of Southern California offered courses in petroleum chemistry. In 1913 the University of California began offering instruction in oil field practice. In 1916 Oklahoma and West Virginia Universities began offering courses in petroleum geology and in 1917 Oklahoma University began offering courses in petroleum refining.

So far as I have been able to ascertain, major undergraduate work in petroleum refining has been offered by the following colleges and universities in the order named: Oklahoma University 1917, Stanford University 1920, Colorado School of Mines 1921, University of Pittsburgh 1922, West Virginia University 1922, Missouri School of Mines 1924, Texas A. & M. College 1925, and Pennsylvania State College 1932.

In addition to the American technical schools and universities previously mentioned, the following schools offer some courses dealing with the technology of the petroleum industry: University of Colorado, University of Illinois, University of Kentucky, Lehigh University, Massachusetts Institute of Technology, University of Michigan, University of Minnesota, Ohio State University, Oregon State College, Rich Institute, Wisconsin State Mining School, University of Wyoming.

In addition to offering the regular four-year course leading to a degree in some branch of petroleum or natural gas technology, some of our state colleges and universities have shown the tendency during the past five or six years to branch out into short courses, extension courses, and correspondence courses. Although most of this instruction is not of college grade, it reaches a group which would not receive instruction otherwise, meets a great industrial need, and usually is being presented by men well qualified to give the instruction. Work of this character has been carried on by our state colleges for years in other industries, such as agriculture, dairying, and mining, and is a legitimate and worthwhile function of our state institutions of higher learning.

In recent years some of the major oil companies have followed the policy, adopted many years ago by the electrical and steel companies and public service corporations, of giving a special training course for beginners in the industry. The course usually consists of both theory and practice and is generally required of both high school and university graduates, though the requirements for the two groups differ.

Petroleum engineering education has been discussed previously in the following petroleum volumes of the *Transactions* of the Institute: 1926, pp. 859-938; 1927, pp. 798-829; 1928-29, pp. 574-592; and 1930, pp. 594-600; also by E. R. Lilley, "Petroleum Education and Research Facilities in Great Britain," MINING & METALLURGY, April, 1931.

Bruce Bryan in *The Oil Bulletin* for September, 1930, "Educating Men for the Oil Industry," has given an excellent description of the petroleum engineering courses offered in American colleges and universities.

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Training and Functions *of a* Field Meter Man

E. E. STOVALL

Lone Star Gas Company, Dallas, Texas

Presented at Southwestern Gas Measurement Short Course, Norman, Oklahoma

WE have found that by starting the meter inspector in the office, acquainting him with the procedure of that part of the department's work and letting him study the various handbooks for a few days, has proven to be a very good policy in that he is associated and in direct contact with men who actually understand the theory and the principle of each instrument that is used in gas measurement and that he will be called upon to take care of when he is a full fledged meter inspector. This has a tendency to get him gas measurement or meter minded more quickly than any other method, since he is associated with persons totally meter and gas measurement minded.

Naturally, we want and expect each of our meter inspectors to be able to compute charts; therefore, he is shown in detail the manner in which we proceed in computing them. At the same time he is shown what information is necessary for a meter inspector to give us in order to properly compute the charts. I am referring especially to charts that are incomplete. We try to impress upon him the difficulty that the office experiences if the proper information does not accompany such a chart. The main object of course in giving him office experience before or at the same time that we are training him to take care of the mechanical end of the meter is to teach him the importance of measuring gas from the gas company's standpoint. As has been stated in many instances, "the meter, is more or less the cash register of the gas company."

We, as most other companies do, have a shop maintained at our central headquarters for the purpose of overhauling, making minor repairs, etc., to all types of meters, regulators, gravitometers and numerous other instruments that are used in the field of gas measurement, which is the next place that a new recruit is placed to further educate himself to the mysteries attached to gas measurement and meter work. Usually in employing men for meter inspection work, we have some definite line of the work in mind that we want him to become proficient at, such as an orifice meter inspector and naturally we concentrate and place all of our efforts with him on that particular line of the work.

Our shop foreman is more or less familiar with all different phases of the work carried on in the shop and regardless of the type of work that we intend to place upon this recruit he is very capable of showing the newcomer all that is necessary for him to grasp in order to make of himself a proficient and active meter inspector. Naturally the beginner is placed on a job that does not require a lot of skill to begin with, such as taking the instruments apart that have been sent in for repairs, noting as he does so just what part each particle of the instrument plays in the operation of same. Step by step the apprentice is given more opportunity to overhaul, repair and calibrate the instruments until he has finally grasped the fundamental principles of gas measurement and the operation of meters and regulators. Of course each step that he makes toward this end is under the direct supervision of our shop foreman and we feel that when the foreman advises us that the apprentice has grasped the required amount of knowledge of the work, that we can depend on him to go out and take charge of a district. However, before he is sent out he is brought back to the office for

a few more days study of the office routine and particularly of the charts coming in from the district in which he is to be placed. We have one district known to us as the West Texas District, which is around Ranger and Breckenridge that we usually send our beginners, due mainly to the fact that the services of six or eight meter inspectors are required to properly handle the work and in this particular district we have one man whom we consider in charge of the entire district who supervises and helps the other men in handling their duties as meter inspectors. This particular man is also more or less familiar not only with the working of the instruments but with all other necessary procedure of the operation of the department and we have found that by placing a new recruit under his supervision in charge of a certain number of meters in that district has proven to be a good policy since he has this supervisor nearby who can advise him on any phase of the work that is not perfectly clear to him.

Naturally we, as other companies do, have a regular method or schedule on which our meter inspectors operate, or in other words, the procedure in which he does his work month by month. On orifice meter work our policy has been to have the meter inspector test the meter thoroughly once each month as to its correctness for static pressure, differential zero position, sensitivity of the instrument, leaky meter piping and other minor tests that he may deem necessary, and at least once every three months the meter is tested as for its correctness by a calibration both of the static and the differential throughout the meter range. Each time that the meter inspector makes either of the above tests a report of his findings is sent to our general office on a form drawn for that purpose. It is perhaps well to state at this time that meters that have charts placed on them daily are tested daily by the chart changer for the correctness of the differential at zero and where the charts are placed only once each seven days a like test is made twice during that period.

Inspector's Duties

Usually our orifice meter inspectors have other duties assigned to them such as the care and testing of gravitometers, air recorders, recording thermometers and at least once every six months a gravity test is taken on each field well meter and for our convenience we may have him test a few of our sales or main line check meters once or twice a month. Another duty that is performed by our orifice meter inspector is that of inspecting each and every chart removed from the meters that are under his jurisdiction before they are mailed to the office, and, if for any reason the records made by the meter on any particular chart are not complete, he places the necessary information to properly calculate either on the chart or attaches a letter explaining the conditions that existed. On any chart that the records are complete so that we will have no difficulty in calculating after the chart reaches our office, the meter inspector merely places his initials on the back of it, indicating that he has inspected it before it is mailed to our office.

The duties of a positive meter inspector vary slightly to that of an orifice meter inspector. Our policy has been that a thorough test be made on each positive meter in active service at least once every three months unless conditions warrant a test more often. Incidentally, on meters where it is possible we are using the critical flow method for testing, and where the pressure is not sufficient for us to use this method, we use a test meter for test purposes. Usually a positive meter inspector has only positive meters to take care of in his district. Likewise, the positive meter inspector also inspects any charts removed from the meter before they are mailed to our office for calculation.

Although a meter inspector is not necessarily considered an office man, he is sometimes called upon to do quite a bit of office work in conjunction with the more or less manual labor that is necessary for him to do in order to properly take care of the conditions that exist in the territory under his jurisdiction. For instance, on orifice meters the meter inspector is required to fill out and mail to the general office a complete report as to the connection or disconnection of a meter, attaching also a sketch showing the actual location and conditions existing at this installation relative to other installations in that locality. They also keep a record of all installations showing the meter number, the location, the date of the meter test, the results of the test, the date and the results of each gravity test made. Where there are several chart changers under one meter inspector's supervision, he is required also to keep and report the chart changers' time along with his own to the general office. The positive meter inspectors are required to do practically the same as mentioned above with the exception of making a connect and disconnect report of their meters. This work is usually done by the field foreman in that particular district. However, each time that a positive meter is set or removed, the field foreman advises our meter inspector to that effect. Recently we have required that a report be attached to the time sheets at the end of the month giving in detail the total number of meters that were tested and the total number not tested during the preceding month with full explanation as to why certain meters were not tested. We have found this to be a very good policy in that it eliminates a possibility of overlooking the test of a meter for any great length of time. Every three months our meter inspectors are requested to send in a report covering a list of their tools and the condition of each tool that is in his possession. From this report we check back against a list which we consider a standard equipment for our meter inspectors.

Continuous Operation

Up to this point I have set out as nearly as possible the duties that we know a meter inspector is going to perform in the course of a month or three months, but there are numerous other things that he has to do that we do not anticipate due to their irregularity of occurrence. However, we all know that with any mechanical operated device we are going to have a certain amount of difficulty in keeping it in continuous operation. Therefore, each month our meter inspectors spend considerable time on emergency repair calls, but as I stated before, these calls are somewhat irregular and perhaps some months the amount of time spent on trouble-shooting is comparatively small. We have found that a greater portion of the trouble-shooting can be eliminated if on each inspection the meter inspector is very careful to see that every meter is working properly and correctly. Of course it is highly impossible to anticipate just when a clock is going to stop or when a pressure tube may blow out but these are such seldom occurrences that they are negligible. Most other emergency trips could probably be eliminated, as I have stated before, by the meter inspector properly doing his duty on the periodical inspection that he makes. During the summer months when the days are long and weather conditions permit a meter inspector to cover his territory more quickly, there is plenty of time for painting and completely overhauling each installation. Not only is it of benefit to the meter to keep it neat in appearance, but is also a medium by which the meter inspector's superior can best judge his work.

In my opinion, a meter is as good and as accurate as the

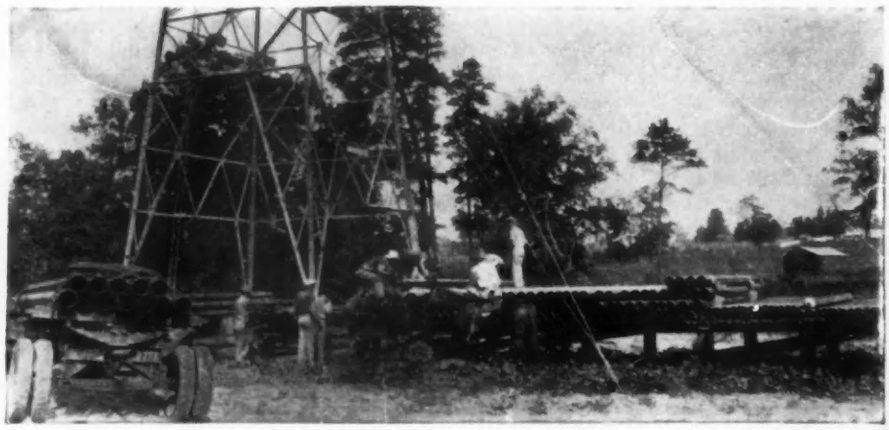
meter inspector. It does not mean necessarily that if a company has all new meters that they are measuring gas accurately, as an in efficient meter inspector or a man who is not well trained can not produce for the company the proper results even though the meters are new, as well as an efficient and well trained man can do with slightly used or old equipment. Of course we would all be delighted to have both the efficient and accurate meter men and the new and up to date meters, but in most cases it is practically impossible. However, with the proper training of our men, even though our equipment is slightly old as far as age is concerned, it is very possible that we can obtain the most accurate and proper results as is possible to do.

Along with the meters and the responsibility placed upon the meter inspector, the company has intrusted considerable other property, such as an automobile and various other equipment. In my opinion, a meter inspector who is not particular and careful with the automobile that he uses for transportation in carrying on his work is really not a good meter inspector. In fact it has been proven in our company that the men who take the best care of their cars also have been found to have done the best on their regular meter inspection work. A meter inspector who abuses the automobile which is intrusted to him usually is found to be a very careless driver, not only abusing the car but endangering his own life, much less destruction of other lives and other property, which in case of an accident could cost the company no end of expense and ill will from the public. Not only should a meter inspector be careful in driving an automobile, but he should not fail to respect the behavior of natural gas, for continuously we hear of accidents that can be attributed to nothing in the world but carelessness on the part of someone connected with the accident. Gas is no respector of persons and if any of us refuse to exercise care in the handling of it we must expect sooner or later to pay the penalty for our rashness. There are correct ways and there are incorrect ways for doing things and we have all been taught the proper methods for operating and controlling the device with which we work and it stands us in good stead to follow out our teachings in practice and to remember to always think before acting.

In order to have a corporation operating with harmony, it is very necessary that each and every department give due consideration to the importance of cooperation. It is not only necessary that the employes of the gas measurement department cooperate among themselves but equally as necessary for them to work in perfect harmony with other departments of the corporation. There is not a single department in a corporation that can operate with the proper efficiency without the full cooperation of each of the other departments and it has been our policy to stress the importance of cooperation to our departmental employes to the same extent as that of doing their regular routine duties. We have found that by being courteous and congenial and working with the other departments that they in turn are more eager to cooperate and help us. We have found also where our employes were not courteous and congenial with the employes of other departments, that it works a greater hardship on us to proficiently operate our department. Without the cooperation of every department in a corporation, we find that it has practically the same effect as having one or two teeth broken from a driving gear. In other words, as the corporation goes around when it gets to that particular department there is a flat space found, causing an unnecessary amount of roughness or rudeness in its operation.

In the eyes and mind of the general public a corporation or a company is considered more or less cold blooded and in some cases I have heard them referred to as nothing but a bunch of highway robbers. The above feelings toward a corporation or company of course in most cases are mistaken ideas, but it is highly possible that some few of the employes of corporations or companies that the public has an ill feeling toward is responsible for such a feeling. One of the greatest ways that a corporation impresses the public is through its representatives, which are, of course, its employes. It does not matter how well we do our work nor how efficient our service, we must have in addition the confidence, respect and good will of those from whom we buy and those to whom we sell. We have found that the meter inspectors and the gas measurement department as a whole are more closely in contact with the people with whom we are dealing than any other department since the meters through which we buy or sell gas is the actual medium that determines how much money is paid or received through our connections. Therefore, you can readily see where the meter inspectors are placed in such a position that it is necessary for them to do their utmost to create a good will, not only with those whom they are in direct contact, but the public in general.

Gas well drilled at Neuengame, near Hamburg, Germany, in 1913.



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MARKETS ~ STATISTICS

Production Goes Above New United States Allocation First Week. Refined Market in Mid-Continent Inclined to Fluctuate — California Situation Firm.

Petroleum Products Markets Unsteady After Recent Gains

THE markets for petroleum products were unsteady last week, after having shown the greatest strength of the year during the two preceding weeks, with 1934 "highs" prevailing during that fortnight on wholesale gasoline in the Mid-Continent.

Service station and tank wagon prices for gasoline did not change materially, except for localized weakening, as in the Los Angeles and Chicago territories, but appeared to be in jeopardy, with wholesale prices sagging, especially in the Mid-Continent.

Throughout the latter region the refinery quotations were an eight cent lower at mid-week than they had been a week before. The previous higher prices which had been in effect for about two weeks, had represented peak quotations for the year, and had been due largely to the voluntary purchasing of surplus gasoline by integrated companies under a plan sponsored by the oil code administration. The weakening of the prices last week was attributable, similarly, at least in part, to a slackening of the inter-refinery purchases.

Oil Bill Creates Uncertainty

Another factor possibly hindering the markets was continued uncertainty in connection with the Thomas-Disney federal oil control bill, with federal regulation apparently marking time, more or less, pending final outcome of the measure, and with the industry not knowing just what to expect in the way of control of crude production. Passage of the bill would of course have assured strict control of crude output, but the oil code administration is in strong position for helping to hold production down under the NIRA authority, following the recent New Orleans appeals court decision upholding the code. And thus it is reasonable to expect effective regulation of crude output. But the federal agents have not yet started any special drive against violators of oil control orders, and are apparently awaiting the fate of the proposed new law; with the idea of proceeding after its disposition either under it or under the code. Nevertheless, the delay has possibly had a dampening effect on the gasoline markets.

Similarly, the market trends of the immediate future are likely to be affected greatly by the materially increased crude oil production allowable placed in effect by the oil code administration June 1. The new national allowable of 2,528,300 barrels daily is 162,000 barrels higher than the April-May allocation, in recognition of increased demand. But the old allowables were substantially exceeded, and if similar excesses occur under the new higher allowables, greater strain on the markets will be involved.

THE OIL WEEKLY

Estimated Average Daily Production of Crude Oil, Barrels

District or State	Week Ending June 9	June 2
TEXAS—		
Texas Panhandle	59,200	59,300
North and West Central Texas	83,300	89,600
West Texas	144,000	140,800
East Central Texas	52,000	52,000
East Texas Field	481,000	478,000
South Texas	48,000	48,000
Texas Gulf Coast	172,500	173,000
Total Texas	1,040,000	1,040,700
OKLAHOMA—		
Oklahoma City	228,310	158,450
Seminole Area	116,250	112,065
Tatums	6,650	6,625
Lucien	8,375	11,100
Others	189,340	188,715
Total Oklahoma	548,925	476,995
LOUISIANA—		
North Louisiana	25,000	25,400
Louisiana Gulf Coast	64,000	57,000
Total Louisiana	89,000	82,400
ARKANSAS	32,000	29,925
KANSAS—		
Ritz-Canton	13,625	13,550
Voshell	6,720	6,900
Nikkel-Hollow	16,475	20,300
Sedgwick	7,875	8,065
Others	82,505	83,285
Total Kansas	127,200	132,100
CALIFORNIA—		
Long Beach	69,000	64,000
Santa Fe Springs	43,000	41,000
Huntington Beach	45,500	38,500
Dominguez	17,000	17,000
Inglewood	9,000	7,000
Ventura Avenue	23,500	22,000
Seal Beach	9,000	7,500
Midway-Sunset	60,000	56,500
Elwood	9,000	10,500
Kettleman Hills	54,500	60,000
Playa del Rey	9,400	8,500
Others	147,100	132,500
Total California	496,000	465,000
MOUNTAIN STATES—		
Wyoming	35,000	32,000
Montana	8,250	7,100
Colorado	3,300	3,000
Total Rocky Mountain States	46,550	42,100
NEW MEXICO	47,000	45,800
EASTERN STATES	108,000	101,000
MICHIGAN	32,700	32,000
Total United States	2,567,375	2,448,020

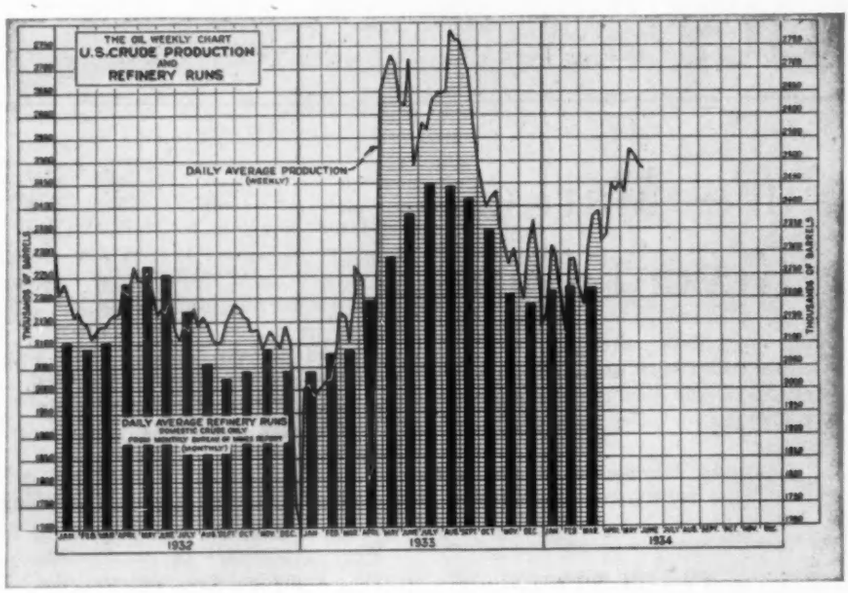
Crude Output Above Allowable

For the week ending June 9, first full week under the new allowables, the results were not encouraging. The new quota no sooner became effective than it was violated. Actual production for the week averaged 2,567,375 barrels daily, according to estimates compiled by The Oil Weekly, an excess of 39,000 barrels over the increased allowable. These figures are, moreover, exclusive of possibly 50,000 barrels of "hot" oil daily in the East Texas field. The week's excess is not perhaps as serious as it may appear, however. For the national production would have been within the allowable if Oklahoma had stayed within its quota instead of showing a 37,000-barrel excess. And Oklahoma is traditionally erratic with its weekly production figures, fluctuating violently upward and downward, with increases and decreases tending to compensate each other.

Refinery prices on gasoline in the Oklahoma-Kansas region were about one-eighth cent lower at the middle of the past week than a week before, third grade averaging about 4⅛ cents a gallon, middle grade 4⅝ cents, and high octane 4⅞ cents. For East Texas the prices, likewise down an eighth cent, were 3⅞ cents, 4⅜ cents, and 4⅝ cents.

Retail Prices

Retail gasoline prices continued fairly steady in most of the Mid-Continent, although showing weakness in some areas, as in the Chicago and Dallas territories. At Chicago major companies increased prices two and 2½ cents a gallon at the beginning of the week, only to lower them similar amounts immediately afterward. Thus the old minimum price of 14.8 cents a gallon, including 4 cents taxes, was in



effect after the changes. In Dallas one of the larger companies cut third grade to 10 cents a gallon retail, and 7 cents tank wagon, with five cents taxes included, in fighting competition; with 11 cents retail generally prevailing among the independent stations, although a few came down to the 10 cent price. In Fort Worth and outlying points the third grade was retailing meanwhile at 13 cents, with a few postings slightly lower. That third grade gasoline sold in North Texas is from the East Texas field. While such material has been depressing the Houston service station prices in the past, minimum postings in that area in recent weeks have been 16 cents.

In California the markets for petroleum products were holding fairly steady last week. The recent increases in service station prices for gasoline were still in effect except for third grade, which most independents had lowered back to 12½ cents, but which majors were continuing to sell at the new price of 13½ cents. Approval of the Pacific coast marketing plan by the federal government had not yet materialized, but hope for its approval and success tended to help the markets of the area.

How Production Compares with Federal Allocation

	Allocation June	Week Ending June 9[1] Daily Average		4 Weeks, June 2[2] Daily Average	
Arkansas	33,000	32,000	−1,000	30,700	
California	500,300	496,000	−4,300	481,600	
Kansas	130,300	127,200	−3,100	130,850	
Louisiana	83,000	89,000	+6,000	84,600	
Texas	1,032,300	1,040,000	+7,700	1,030,200	
Oklahoma	511,700	548,925	+37,225	515,700	
New Mexico	48,000	47,000	−1,000	45,950	
Rocky Mountain	48,000	46,550	−1,450	42,300	
Appalachian States	108,900	108,000	−900	101,150	
Michigan	32,800	32,700	−100	32,650	
United States	2,528,300	2,567,375	+39,075	2,495,700	+129,500[3]
Imports crude and fuel oil				140,774	
Crude to Stills[2]				2,461,250	

[1]Oil Weekly estimate for current week. [2] A. P. I. estimate. [3]Allowable for period was 2,366,200 barrels.

Crude Production Exceeds New Allowable First Week

THE new, higher crude oil production allowable for the United States, placed in effect June 1 by the oil code administration, had barely been ushered in when it came to be violated.

For the week ending June 9 the nation's output of crude averaged 2,567,375 barrels daily, or about 39,000 barrels more than the new allowable. This is ixclusive, moreover, of "hot" oil, most of which is in East Texas, and which is estimated to be averaging somewhat under 50,000 barrels daily.

While the immediate violation of the new allowable is somewhat discouraging, it appears less serious, perhaps, in view of the fact only one state, Oklahoma, was largely responsible for the excess. And it is not at all unusual for Oklahoma to show violent fluctuations from week to week, with sharp rises and large declines tending to offset each other.

The new national allowable of 2,528,300 barrels daily is 162,100 barrels higher than the allowable in effect in April and May.

Oklahoma's output for the week ending June 9 averaged 548,925 barrels daily, compared with an allowable of 511,700 barrels. In the previous week the state had averaged only 476,995 barrels per day. The sharp rise was caused mostly by a jump of Oklahoma City output to 228,310 barrels daily from 158,450 barrels.

Texas was also above its allowable, although only by about 8000 barrels, having averaged 1,040,000 barrels per day, of which the East Texas field furnished 481,000 barrels. These figures do not include East Texas "hot" oil.

California and Kansas, the other two of the four leading oil producing states, both performed more favorably than Oklahoma and Texas. California's output of 496,000 barrels daily was 4300 barrels under its allowable, and compared with previous week's production of 465,000 barrels daily. The Kansas output of 127,200 barrels daily was 3100 barrels below the state allowable, and compared with production of 132,100 barrels daily the week before.

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks, and Cracked Gasoline Production, Week Ended June 2, 1934

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	464	79.7	6,102	10,488	16,590	949	191	7,465	496	471	95.0	58
Appalachian	150	140	93.3	98	70.0	1,031	580	1,611	373	157	851	69	69	100.0	26
Ind., Ill., Ky.	446	422	94.6	316	74.9	6,065	2,593	8,658	1,149	48	2,929	325	309	95.1	87
Okla., Kans., Mo.	461	386	83.7	218	56.5	3,710	1,874	5,584	780	566	3,147	256	238	93.0	60
Inland Texas	351	167	47.6	85	50.9	1,157	127	1,284	311	313	1,789	82	66	80.5	21
Texas Gulf	566	552	97.5	394	71.4	4,075	183	4,258	1,957	170	5,543	358	355	99.2	82
Louisiana Gulf	168	162	96.4	86	53.1	636	646	1,282	232	.....	1,091	71	71	100.0	24
North La.,—Ark.	92	77	83.7	50	64.9	234	46	280	83	30	434	41	38	92.7	11
Rocky Mountain	96	64	66.7	28	43.8	1,156	.....	1,156	190	43	679	46	42	91.3	8
California	848	822	96.9	388	47.2	10,644	1,885	12,529	871	2,382	80,296	209	209	100.0	53
TOTALS WEEK: June 2, 1934	3,760	3,374	89.7	2,127	63.0	34,810	18,422	53,232	6,895	4,350	104,224	1,953	1,868	95.6	430
May 26, 1934	3,760	3,374	89.7	2,405	71.3	35,987	18,506	54,493	7,377	4,350	104,010	1,953	1,868	95.6	*444

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week June 2, 1934, compared with June 1933 Bureau figures.

Estimate B. of M. Basis June 2, 1934	2,270		455
Estimate B. of M. Basis May 26, 1934	2,550		470
U. S. B. of M. June 1933 Daily Average Crude Runs	2,487	U. S. B. of M. June 1933: Daily Average Cracked Prod.	529

(a) Amount of unfinished gasoline contained in naphtha distillates.
(b) Estimated. Includes unblended Natural Gasoline at refineries and plants; also blended Motor Fuel at plants.
*Revised to compare with subsequent weeks.

Oklahoma Commission Fixes Potential Schedule

Oklahoma City.—Order No. 7518, Cause C. D. No. 146 dealing with potentials for all Class B pools in Oklahoma was signed May 31 and handed down during the week. The following provisions are made for potential determinations to be made during June, and applicable for the period July 1 to January 1, 1935:

Seminole et al, Maud, St. Louis, West Asher, Konawa, Sasakwa, Allen, East Earlsboro Calvin sand, and Fish, will take three percent per month or a total of 18 percent decline below potentials determined for January, 1934, except those leases having a potential capacity of 50 barrels or less per day which shall not be declined; Tatums will take a decline of 50 percent below the January, 1934, potential, except those leases having a potential capacity of 50 barrels or less per day which shall not be declined, and Sasakwa Townsite, each well to take a four-hour gauge during June, such four-hour gauge to be multiplied by six in determining the potential.

Summary of Field Results During Past Week

State	Completions	Oil wells	Gas wells	Failures	Init. prod.
Arkansas	3	1	0	2	10
California	10	10	0	0	4,760
Kansas	24	20	0	4	6,696
Kentucky	4	3	1	0	80
Louisiana	18	6	3	9	3,043
Michigan	16	12	1	3	8,026
Montana	3	1	1	1	50
New Mexico	2	1	0	1	3,500
Ohio	27	12	11	4	154
Oklahoma	40	24	0	16	7,199
Pennsylvania	21	19	2	0	80
Texas	217	161	3	53	764,868
Total	385	270	22	93	798,466

Reviews Board Recommend Changes for Oil Code

Washington, D. C., June 8.—The long awaited report of the Darrow Review Board on the oil code was submitted to President Roosevelt this afternoon.

The views of the National Recovery Review Board on the agreement for the oil industry, together with its analysis agreement for the oil industry, analysis of 12 other codes, were embodied in a lengthy report in which, it was said, specific recommendations are made for revision of the pacts to eliminate provisions found to increase monopoly and react to the advantage of small units.

In view of the bitter castigation of the National Recovery Administration in the board's initial report, it is anticipated that the analysis of the oil code will be replete with criticism of its negotiation and administration and that numerous changes will be recommended.

During the hearing on the code in April members of the board made it clear that their sympathies were entirely with com-

Comparison of Permits Granted for New Wells

State	Week ending June 9	Total this month	Total this year	Total this date last year	1933 year total
Arkansas	2	6	34	28	47
California	12	25	233	145	593
Louisiana	42	58	342	227	755
Kansas	20	36	413	220	682
Michigan	4	20	191	102	420
Oklahoma	60	101	966	417	1315
Texas	372	660	5725	2414	7845
Total	512	906	7904	3569	11,651

plainants, and it is not anticipated that anything favorable to the code, the oil administration or the Planning and Co-ordination Committee will be found in the report.

It is not expected that the report will be made public until recovery and oil administration officials have had an opportunity to analyze and answer the board, both report and response probably being released together as was done with the first report.

The board is preparing to dissolve not later than July 1, and before leaving Washington will file a final report with the President making general recommendation for reorganization of the recovery administration's methods.

Royal Dutch Company Earnings Show Increase

New York.—The annual report of the Royal Dutch Company for 1933, just released, showed general improvement over the preceding year. Net profits for 1933 amounting to 30,546,306.48 pounds, allowing a dividend of six percent after paying four percent on preferred shares. Production for the Shell group for 1933 amounted to 21,957,392 metric tons, which is an increase of 4.6 percent over 1932. Shell Petroleum Corporation, one of the American subsidiaries, principally contributing the increase. The report shows shipping with loading capacity of 1,818,425 tons at the close of the year which during 1933 moved 16,166,000 tons of cargo.

The report throughout reflects economy in management for the previous year. Exchange of materials between different groups and divisions and a general tone of ultra conservative management.

The international monetary situation occupies a prominent part in the report which at one point says "Countries—cannot, however, have it both ways. Officially maintaining a standardized currency policy and at the same time despoiling their silver money of much of its true value. Such tactics are bound to lead to an all-round dislocation of world trade and in fact are already well on the way to do so." The possible effect of currency confusion on the Royal Dutch-Shell business pointed out in a sentence reading "In our industry, for instance, there is a latent danger symptoms of which are already perceptible—that oil producing countries with a low rate of exchange or—like Russia—without any rate of exchange at all, will try to oust others from the export markets. Naturally we shall fight with all our might against such attempts."

Increased Russian Drilling Fails to Enlarge Production

New York.—A less optimistic view of the oil situation in Russia than has occurred in reports from the Soviets, is to be found in that section of the annual report of the Royal Dutch Company, just released, dealing with the international situation. Despite increases in drilling, the report says, production showed no gain.

The production of the world for 1933, according to the report was as follows:

	1933		1932	
	Metric Tons	Barrels	Metric Tons	Barrels
United States	122,364,739	917,735,542.5	106,653,329	799,899,967.5
Russia	21,440,000	160,800,000	21,395,700	160,467,750
Venezuela	17,293,193	129,698,947.5	17,085,278	128,139,585
Romania	7,387,000	55,402,500	7,350,321	55,127,407.5
Persia	7,200,427	54,003,202.5	6,549,246	49,119,345
Dutch East Indies	5,321,500	39,911,250	4,897,748	36,733,110
Mexico	5,076,467	38,073,502.5	4,906,536	36,799,020
Argentina	1,987,483	14,906,122.5	1,892,003	14,190,022.5
Columbia	1,848,317	13,862,377.5	2,342,976	17,572,320
Peru	1,781,683	13,362,622.5	1,337,884	10,034,130
Trinidad	1,387,571	10,406,782.5	1,468,105	11,010,787.5
British India	1,084,837	8,136,277.5	1,164,694	8,735,205
British Borneo (Sarawak and Brunei)	623,484	4,676,130	527,089	3,953,167.5
Poland	550,672	4,130,040	556,685	4,175,137.5
Germany	238,503	1,788,722.5	229,794	1,723,455
Japan (including Taiwan)	233,237	1,749,277.5	233,237	1,749,277.5
Egypt	232,451	1,743,382.5	265,056	1,987,920
Other countries	642,663	4,819,972.5	1,049,520	7,871,400
	196,694,227	1,475,206,652.5	179,905,201	1,349,289,007.5

From these figures it appears that Russia's oil production in 1933 remained at practically the same level as that of 1932. On the other hand there was a considerable increase in drilling activity, 2,749,500 feet having been drilled as against 2,443,000 feet the year before. What this means will be clear when it is noted, for instance, that in Venezuela all producing companies together drilled in 1933, 363,000 feet (thus about one eighth of what Russia drilled) and yet the production in that country exceeded that of 1932 and was not much less than that of Russia. Notwithstanding an increase of as much as 30 percent in drilling in the Grozny field the production there decreased by about 21,000,000 barrels. This decrease is ascribed by the official Soviet press to lack of organization, but this explanation is incomplete, there being two important facts to be noted: firstly, that the layers in production on the Grozny field are showing sure signs of exhaustion, and, secondly, that the Soviet drilling technique has not yet succeeded in overcoming the difficulties encountered in trying to reach deeper layers.

"Although, as has been remarked, Russia's production was at the same level as in 1932, the total refinery throughput in 1933 was much less, some 138,837,750 barrels having been treated as against 151,608,750 barrels in 1932. The cause of this lies in the fact that the extension of the refining capacity in Baku has not kept pace with the increase of that field's crude oil production, whilst the refining capacity which became available in Grozny as a result of the decline in production there could not be sufficiently utilized for Baku production on account of the transport difficulties.

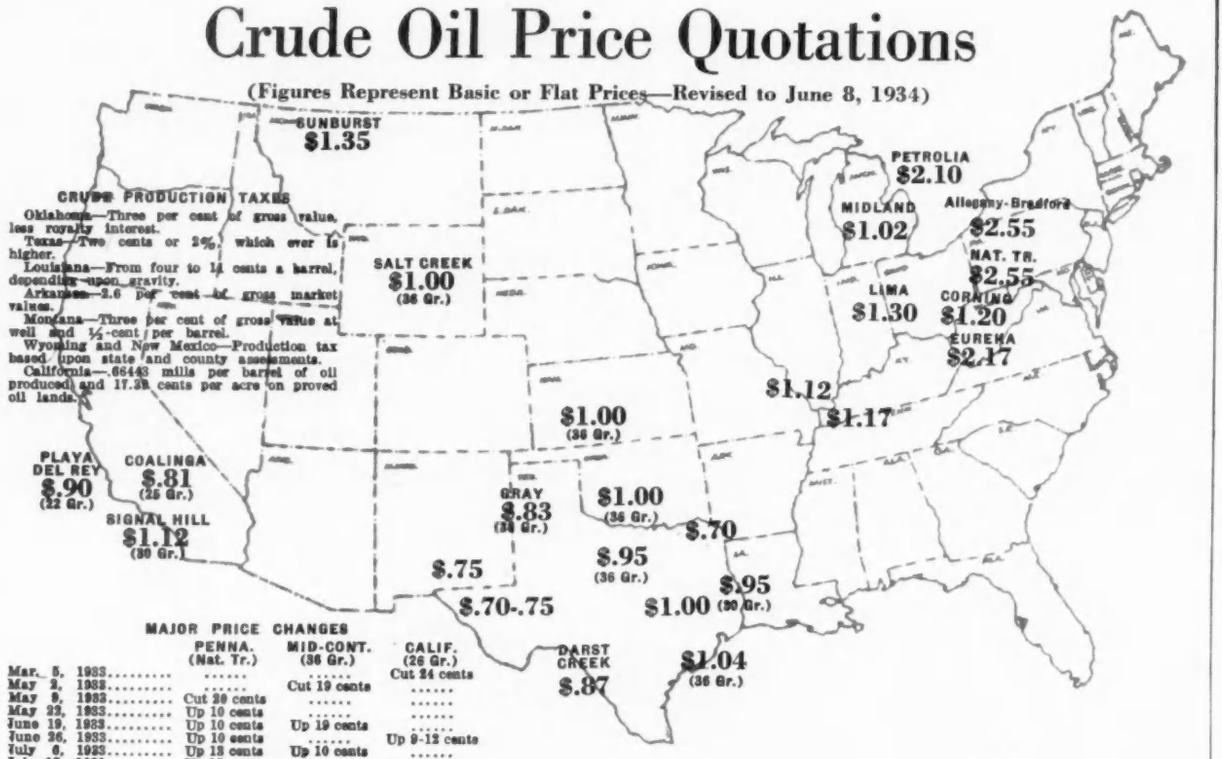
"Although home consumption in Russia was reduced from 107,702,250 barrels in 1932 to 99,448,500 barrels in 1933, while production remained the same, the exports could not be maintained at the previous level, falling from 45,795,750 to 36,708,000 tons. These figures fully confirm the opinion expressed in our previous report that the export would be bound to decline as soon as the previously accumulated stocks of oil were exhausted.

"In spite of numerous reports in the Soviet press about new oil fields being discovered, production is still practically concentrated in the old districts. The table below shows the share of the old fields (Baku, Grozny, Maikop and Emba) in Russia's total production:

1930	1931	1932	1933
99.2%	98.9%	98.6%	98.9%

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices—Revised to June 8, 1934)



CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.
Texas—Two cents or 2%, which ever is higher.
Louisiana—From four to 1¼ cents a barrel, depending upon gravity.
Arkansas—2.6 per cent of gross market values.
Montana—Three per cent of gross value at well and ½-cent per barrel.
Wyoming and New Mexico—Production tax based upon state and county assessments.
California—.66443 mills per barrel of oil produced and 17.38 cents per acre on proved oil lands.

MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (26 Gr.)
Mar. 5, 1933	.....	.....	Cut 24 cents
May 2, 1933	.....	Cut 19 cents	.....
May 9, 1933	Cut 20 cents	.....	.....
May 22, 1933	Up 10 cents	.....	.....
June 19, 1933	Up 10 cents	Up 19 cents	.....
June 26, 1933	Up 10 cents	.....	Up 9-12 cents
July 6, 1933	Up 13 cents	Up 10 cents	.....
July 17, 1933	Up 15 cents	.....	.....
July 28, 1933	Up 15 cents	.....	.....
Aug. 11, 1933	Up 10 cents	.....	.....
Aug. 24, 1933	.....	Up 10 cents	.....
Aug. 30, 1933	Up 15 cents	.....	.....
Sept. 6, 1933	Up 10 cents	Up 10 cents	Up 15 cents
Sept. 8, 1933	.....	Up 15 cents	.....
May 1, 1934	Up 10 cents	.....	.....

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia.	Below			
Humble, Rabbs Ridge	20— .82	2¢	34— 1.12	9-29-33
South and SW Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
Eldorado East Field and Smackover	*.70			9-29-33
North Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85-*.87			1- 1-34
South Louisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds.	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Elk Basin	$*1.17			9-29-33
Grass Creek (Light)	*1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Ponders	*.65			8-25-33
Hog Back, N.M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.30			9-29-33
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.17			9-29-33
California				
Signal Hill	14— .65	1¢	16—$ .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B.,Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Rey	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .99	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans				
Domingues	23— .83	3¢	24— .86	9- 6-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Grav.	Dif.	High Grav	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, McKittrick, Kern River	14— .57		19— .57	9- 6-33
Midway Sunset, Elk Hills,Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .66	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 6-33
Pennsylvania				
Bradford	*2.25			4- 1-34
Sw Pa., Pipe Line	*2.22			4- 1-34
Eureka Pipe Line	*2.17			4- 1-34
Buckeye Pipe Line	*2.07			4- 1-34
Corning Grade	*1.20			9-11-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-33
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

Knode Resigns From Railroad Commission

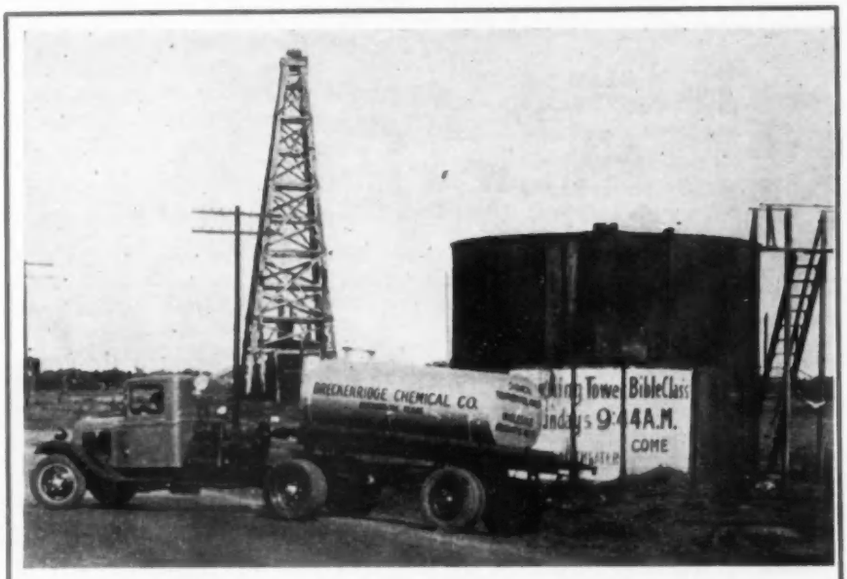
Austin, Texas.—W. F. Knode, chief petroleum engineer of the Texas Railroad Commission, has announced his resignation, effective July 1.

Knode will enter consulting work, and during the first few weeks after his resignation is effective, he will work out development plans for the gas supply of Southern Alkali Company, which has headquarters at Corpus Christi. The company has its own gas leases, and Knode will conduct a series of experiments to determine the most efficient method of operating the wells.

He has been in the commission's service since 1931, and during that time has planned and carried out effective conservation programs for many Texas oil fields in every section of the state.

For the past five months Knode has planned to leave the commission, but repeatedly delayed in order to assist in the various production control problems with which he was familiar.

No successor has been named to fill the post, but an announcement is expected about June 20.



Acid Treatments of Wells

(in lime producing areas) are the best bets an oil man ever made.

The above scene shows Glenridge Oil Co.'s Walker-Caldwell No. 3, Mr. W. R. Ewing, Local Manager, drilled in 1920, together with a very familiar landmark 2 miles east of Breckenridge on U. S. Highway No. 80. In 1932 the production on this well had declined to 3 barrels oil with 11 barrels of water—decidedly unprofitable with oil at 50 cents. Mr. Ewing decided to clean the well out and have us treat it with a 1,000 gallon acid charge before plugging, which was done January 22, 1933—followed by 168 bbls. of oil in 90 minutes.

The well came in for 150 barrels of oil and about the same of water—6 months later it was still producing 70 barrels per day of pipe line oil. Its allowable now is 28 barrels per day and its potential is still about 60 barrels (June 1, 1934.)

Acid treatments to bring new wells into production reach many times more area than old method.

Better pipe protection than has heretofore been available and full insurance coverage.

BRECKENRIDGE CHEMICAL COMPANY

Department of Brown Tool Company

PHONE 254 - NIGHT 910 **BRECKENRIDGE, TEXAS**

Chemical Treatment of Oil Wells . . . Wholesale Muriatic Acid

"Hot" Oil Drive in East Texas Successful

Tyler, Texas.—Uncovering of numerous secretly operated by-passes and arrests of field laborers hired to steal oil, as well as the arrest of a few independent refiners alleged to be buyers of the stolen crude, caused a decline in crude movement from the East Texas field during the week ending June 4. Allowable production during this period was estimated at 487,350 barrels daily, while shipments were estimated at 534,600 barrels daily. The latter figure sustained a loss of about 6000 barrels compared to the average maintained the previous week. Trunk lines serving the field averaged 478,775 barrels daily.

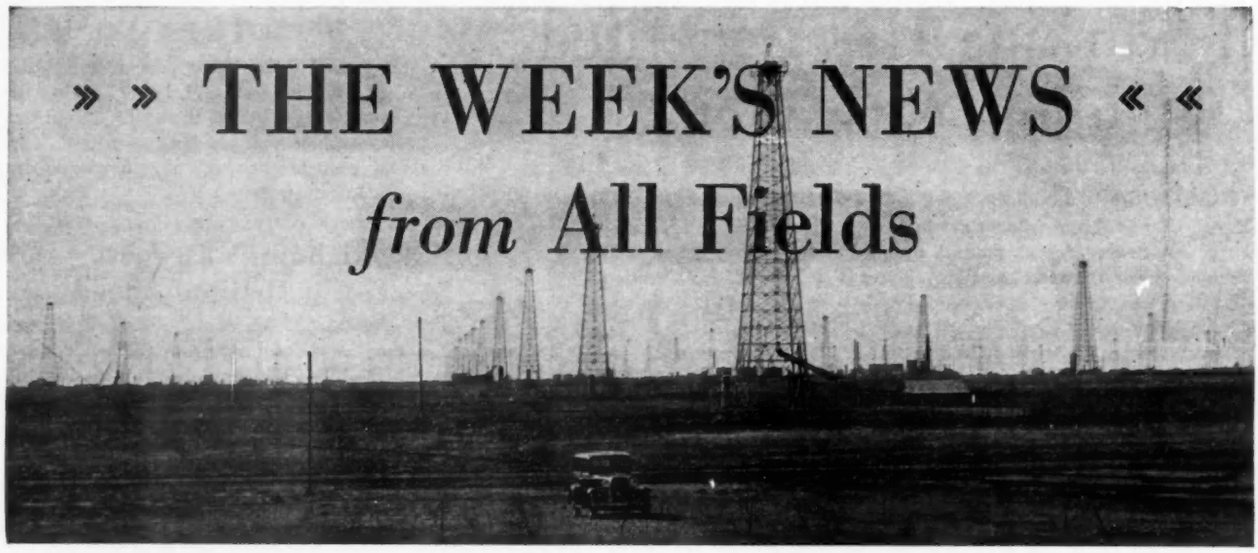
Agents of the Texas Railroad Commission have been unusually successful in locating by-passes within the past several weeks and have followed through by preferring charges against those responsible for their operation. All defendants have made the $1000 bond demanded by the district court. No dates have been set for preliminary trials.

Oil Workers Select Officers and Headquarters

Fort Worth, Texas.—Headquarters of the International Association of Oil Field, Gas Well and Refinery Workers of America are to be transferred from Fort Worth to Washington, D. C. This move was approved by delegates attending the annual convention held here June 4 to 8 inclusive, with approximately 40 delegates present. Selection of Washington for future headquarters was deemed advisable in order to enable the executive officrs to work with federal authorities on labor problems. Harvey C. Fremming, Long Beach, California, was reelected president of the organization and John L. Coulter, Fort Worth, was also retained as secretary-treasurer. The following five vice presidents were elected for the ensuing year: F. L. Phillips, Ventura, California; I. B. Fisher, Hammond, Indiana; G. H. Church, Oklahoma City; Geo. Taylor, Beaumont, Texas; and J. C. Coulter, Long Beach, California.

South Burbank Pool Extended One Half Mile

Fairfax, Okla.—The new South Burbank pool of Osage County received a half mile eastward extension during the week when Carter Oil Company and Norbla Oil Company's Ducotey 5, CNE NE SE Section 3-25n-6e, made 3120 barrels the first 24 hours from Burbank sand at 2808 to 2867 feet. Total depth is 2869 feet. On a second 24-hour test the well made 2986 barrels. Locations have been staked for the north, northeast and east offsets.



» » THE WEEK'S NEWS « «
from All Fields

HIGH SPOTS IN BRIEF

New drilling operations during the week again had a substantial gain over completions in the United States. Completions reported total 385, of which 270 were oil producers having an estimated initial output of 798,466 barrels. There were 22 gas wells and 93 failures. On the other end, 512 new operations were reported from states where the figures are available, meaning that there are conservatively 200 more wells drilling now than a couple of weeks ago. Texas continues the big lead in both columns, 161 oil producers out of 217 total completions adding 764,868 barrels of new potential output in the prorated fields of that state. East Texas accounted for 690,000 barrels initial from 95 oil wells.

East Texas

A new oil producing pool, generally conceded to be on a large structure, has been found near Rusk in Cherokee County. The well is flowing 30 barrels hourly from the Woodbine. The new field is 35 miles south of East Texas and is attracting much attention. The Cayuga field, Anderson County, received two important extensions last week; one doubled the width of the producing district and the other carried production more than one half mile south.

South Texas

A new deep, high gravity oil producing sand has been found in the Cole field, Webb County. A number of interesting developments in the shallow district of South Texas were headed by a wildcat strike two miles north of Jacob pool, McMullen County. Two wildcats in Refugio County are showing gas. A new Pettus sand field, one mile west of Tuleta, Bee County, is apparently in the making.

Gulf Coast

The Bosco field of the Louisiana Coast has commenced a new play of considerable size. West of Bosco about 12 miles, another important wildcat test is due to be commenced in the near future.

Failure of well north of the Livingston field, Polk County, Texas, indicates the field is being defined. The Splendora wildcat test in Montgomery County is flowing 47 barrels of oil in 12 hours.

Oklahoma

The new South Burbank field, Oklahoma's most active pool, was etended one-half mile eastward by a 3120-barrel well. The Stella-Newalla structure, 12 miles east of the Oklahoma City pool, and which has attracted attention from time to time, is proving disappointing. A test has failed to find production in the Simpson section. During the week a well in the northwest extension to the Tatums pool blew out. It is making a large quantity of gas and water. The Binger test continues to drill ahead. It is now below 10,450 feet.

California

Interest in California is centered in General Petroleum Corporation's deep test at Belridge, which has a depth of 11,377 feet, the greatest penetration ever reached. The well, after running a string of casing, is now being tested. It is showing gas through heavy drilling mud. California operators are seeking new producing areas, much future drilling in new areas and to deeper horizons is in prospect.

New Mexico

Completion of a second prolific producer near Cooper, Lea County, has resulted in the starting of a sizeable drilling campaign.

Louisiana-Arkansas-Mississippi

An active leasing play continues in the Central Louisiana trend. Chief interest in Arkansas is in the Patterson wildcat in Miller County, which set casing last week preparatory to testing. Several wildcats are contemplated for Mississippi. A 65,000-acre block has been assembled in Alabama and a well will be started at once.

Michigan

As a result of commercial showings from the Dundee horizon on the south flank of the Porter pool there are possibilities of renewed drilling in this district.

West Texas

Further extensions to the North Cowden field, Ector County, calls for additional drilling. A revival of activity in the Gulf-Waddell field, Crane County, is anticipated also. Recent completions in the Scarborough field, Winkler County, offer encouragement.

Reworking Has Benefited Oklahoma City Wells

Oklahoma City.—Conditions in the Oklahoma City pool have shown gradual improvement during recent months due to reconditioning of wells and to better utilization of gas energy. Practically all of the older wells have been reworked in some manner. In recent months operators have been successful in a large number of instances in shutting off water through plugging back, whereas, early work was marked with few successes. This is especially true of the Wilcox sand zone in which 65 wells have been plugged back or are being plugged back.

As of June 6, there were three locations, five rigs, 17 tests drilling, rigging up or waiting for cement to set and six tests shut down for various reasons. In addition there were 19 old wells being reconditioned which involves mostly cleaning out. A check of the field shows the following new activities:

Abilene Oil Company's Rock Island 2, NE SE SW Section 34-12n-3w, drilled to 6495 feet, tubed and shut down; Harrell-Davis Oil Company's Riverside Park 2, SE SW SE SW Section 34-12n-3w, repairing dead line with total depth at 3300 feet; Helmerich & Payne's Larkin 1, NE NW SE Section 34-12n-3w, made 1223 barrels in four hours and 24 minutes and cut out; J. J. Hardin et al's Simpson-Community 1, SW NW SW SE Section 34-12n-3w, killing with mud at 6365 feet after trying to blow out twice.

Westgate Oil Company's Carey 6, NW SE NW SE Section 34-12n-3w, drilling below 5000 feet; Carey 7, SW NW NW SE Section 34-12n-3w, shut down by court order. Ray Stephens' Rucker 1, SW NW NW NW Section 2-11n-3w, shut down at 6369 feet; Denver Producing & Refining Company's Washington 1, SE NW NW NW Section 3-11n-3w, total depth 6498 feet, preparing to clean out; Helmerich & Payne's M.K.&T. 1, NE NE NW NW Section 3-11n-3w, shut down at 6488 feet; Knox Garvin et al's Central Addition 1, NW NW SE SE Section 3-11n-3w, drilling below 5500 feet, and the same operators' Central Addition 2, NW SW NE SE Section 3-11n-3w, rig shut down.

Southwestern Portion of Pool

Harrell-Davis Oil Company's Trosper (Hani) 1, NE SW NE SW Section 22-11n-3w, drilling below 6200 feet; Larking & Warr's Carney 1, SE SW SW NE Section 22-11n-3w, set 10-inch casing at 2004 feet and waiting on cement to set; Beaucamp 2, SW SW SW SE Section 22-11n-3w, drilling below 1750 feet; Farris 1, SE NW NE SW Section 22-11n-3w, drilling below 4500 feet; Goodwin 1, SE SE SE NW Section 22-11n-3w, drilled to 6538 feet and shot with 60 quarts from 6498 to 6538 feet; Johnson 1, NE SW NE SE Section 22-11n-3w, drilling below 5300 feet; Travis 1, SE SE SE NW Section 22-11n-3w, rigging up rotary tools.

Phillips Petroleum Company's Holstein 3, NE SW SE Section 22-11n-3w, is a location; Wallace 3, NW SE SE Section 22-11n-3w, location.

Indian Territory Illuminating Oil Company's Peterson 9, SWc Section 25-11n-3w, is shut down awaiting orders; Wisel 5, SEc Section 26-11n-3w, drilling below 6000 feet.

Phillips Petroleum Company and Shell Petroleum Corporation's Berg 7, NW SE SW Section 26-11n-3w, is rigging up rotary; Berg 8, NW NE SE SW Section 26-11n-3w, location.

Nebo Oil Company's Community 3, NE SE NW NE Section 27-11n-3w, set 10-inch casing at 2004 feet, seven-inch casing at 6535 feet; waiting on cement to set. Indian Territory Illuminating Oil Company's State Land 11, NWc Section 36-11n-3w, has nine-inch casing at 5667 feet and is drilling plugs.

Stella-Newalla Structure Test Appears Unfavorable

Oklahoma City.—Hopes for Wilcox sand production on the Stella-Newalla structure approximately 12 miles east of production in the Oklahoma City pool were falling during the week as Springrose Drilling Company et al's Edwards 1, CSE SE Section 19-11n-1e, penetrated further into the Simpson section without a showing.

Late in the week operators topped a dry sand at 6514 feet and at 6530 feet went into green shale. When last reported it was drilling below 6540 feet with nothing showing. The sand at 6514 feet, although not definitely correlated, apparently is upper Wilcox of the Seminole type section.

Assuming this correlation correct there remains the possibility of production either from Lower Wilcox sand or some of the sands which lie between that member and the Arbuckle limestone.

This test was temporarily completed in Hunton limestone several months ago but the small production rapidly declined and the well started making water. It is reported that despite failure of finding production in the Simpson section, if Wilcox sand definitely is proven to be present another test will be drilled on the structure farther to the east. The present test is located on the west limb of a large surface structure with which some geologists take issue.

Oklahoma's Deepest Test Is Drilling Ahead

Binger, Oklahoma.—Denver Producing and Refining Company's Adah Noe 1, CNW SW SW Section 34-10n-10w, Oklahoma's deep test, was reported drilling below 10,450 feet still in Pennsylvanian beds. This depth which is thought to be reliably reported would make it the deepest test in Oklahoma by a margin of 371 feet and place it among the four deepest tests in the world. Closer check of the records shows correct length of the last string of casing to be 9909 feet including connections. Corrected total depth at the time this string was run was 9986 feet.

Considerable difference of opinion continues to exist regarding probable importance of the sand logged just below 9900 feet and cored from 9974 to 9986 feet. Many of those who closely observed the test before and after casing was run believe the sand to have been damaged. Fragments of sand recovered after the test was shot indicate along freshly broken surfaces that foreign substances probably penetrated the sand at least for a short distance back from the walls of the hole. The opinion that a horizon of commercial importance has been found, but that oil in commercial quantities never will be extracted through the present hole is being expressed by several who are familar with conditions during cementing of the casing.

Crescent Pool Test Is Being Completed

Crescent, Oklahoma.—Eason Oil Company's Katchor 3, NW SW SW Section 34-17n-4w, one of the four 10-acre locations in the new Crescent pool, was shut down awaiting orders at 1810 feet following approval of the drilling campaign that calls for a plan of one well to each 40-acre tract. Shortly after the discovery well was completed owners of acreage in the area reached a voluntary one well to 40-acre agreement. Sinclair Prairie Oil Company did not enter the agreement and shortly thereafter made three 10-acre locations. Each of these were drilled and completed as producers. The Eason location was the first breach of the 40-acre plan since completion of these three tests.

Kansas Operators Add 20 New Oil Producers

Wichita, Kansas.—Kansas operations resulted during the week in 20 completed oil wells with total initial production of 6696 barrels and two dry holes.

Initial production by counties was as follows: MchPerson County, 4210 barrels; Russell, 770 barrels; Rice, 736 barrels; Harvey, 555 barrels; Butler, 302 barrels; Woodson, 55 barrels; Greenwood, 40 barrels; and Elk, 28 barrels.

Included in the reports shown below are two abandoned locations:

Company, Well and Location	Init. Prod. Bbls.	Depth
BUTLER COUNTY—		
Palmer, Harder 1, nw se nw 27-24s-3e	*	3264
Stanford, Brainerd 1, sw sw sw sw 35-24s-3e	108	2735
Empire, Paulson 73, sw sw se se 2-26s-4e	84	1684
Empire, Koogler 104, se ne se 20-26s-5e	110	2543
ELK COUNTY—		
Jones, Walker 4, se ne se 5-31s-10e	28	1573
GREENWOOD COUNTY—		
Skelly, Wick 20, sw sw se sw 27-22s-11e (owdd)	40	1988
HARVEY COUNTY—		
Hollow et al, Schmidt 5, ne se nw 17-22s-3w	260	3485
Sinclair Prairie, Neufeldt 4-A, sw se se 18-22s-3w	295	3484
LYON COUNTY—		
Ackman, Hind 1, ne ne nw 30-21s-12e	*	2015
McPHERSON COUNTY—		
Darby Petroleum, Coons 5, nw ne sw 20-19s-1w	200	3426
McKnab, Flook 1-A, ne nw sw 29-19s-1w	67	3423
Cling, Paulseen 1, ne ne nw 6-19s-2w	35	2392
Rush et al, Johnson 1, cse nw 10-19s-2w (owdd)	129	2981
McBride, Giffen 6, ce¼ ne sw 14-19s-2w	1083	3369
Shell, Myers 8-B, cw½ nw se 14-19s-2w	867	3367
Wolf Creek, Dunsford 2, ne ne sw 23-19s-2w	¶6-215	2957
Lario Oil Gas, Lacquement 1, nw sw ne 6-20s-1w (owdd)	140	3444
Madison, Boesker 1, se se nw 29-20s-1w	*	....
Mabee, Friesen 6, se sw se 33-21s-3w	1474	3497
Mabee, Nikkel 6-B, se ne se 33-21s-3w	*	....
RICE COUNTY—		
Werbros, Masemore 3, ne sw nw 18-20s-9w	736	3327
RUSSELL COUNTY—		
Sianol Oil, Taylor 1, se se se 26-15s-13w	385	3097
Empire, Bender B 1-B, ne ne se 23-15s-14w	385	3369
WOODSON COUNTY—		
Nye et al, Sage 1, se se se se 36-23s-13e	55	1759

*Failures; †Junked; ¶Million cu. ft. gas.

Wildcat Test Starting In West Asher District

Tulsa.—Phillips Petroleum Company, Gypsy Oil Company et al announced location for Lewis 1, CNE NE NW Section 17-6n-3e, on a 1360-acre block, 2½ miles northwest of the West Asher pool in southern Pottawatomie County. The block includes the E½ E½ Section 7-6n-3e; the W½ and the W½ E½ Section 8-6n-

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TULSA, OKLAHOMA

3e; the W½, the SE¼, the S½ NE and the NW NE Section 17-6n-3e; and E½ NE and NE SE Section 18-6n-3e. Ownership of leases in the block is as follows: Phillips Petroleum Company, 600 acres; Gypsy Oil Company, 200 acres; The Texas Company, 80 acres; Sinclair Prairie Oil Company, 80 acres; Sinclair Prairie and Slick, 40 acres; Sinclair Prairie, Slick and Cosden, 40 acres; Shell Petroleum Corporation, 80 acres; Fisher Oil Company, 80 acres; Mid-Continent Petroleum Corporation, 80 acres; L. H. Foster, 40 acres; and Magnolia Petroleum Company, 40 acres. The test is said to be located on a seismograph "high."

Osage County Still Leads in Oklahoma

Tulsa.—Twenty-four oil wells resulted in a total of 7199 barrels of new production during the week as scouts reported in addition four abandoned locations and 12 dry holes, a total of 40 completions in 16 Oklahoma counties.

Total footage was 80,755 feet of which 80,041 feet were in new tests and 714 feet in two old wells drilled deeper.

Osage County maintained a lead it has held for several weeks with 4229 barrels of new production from eight oil wells.

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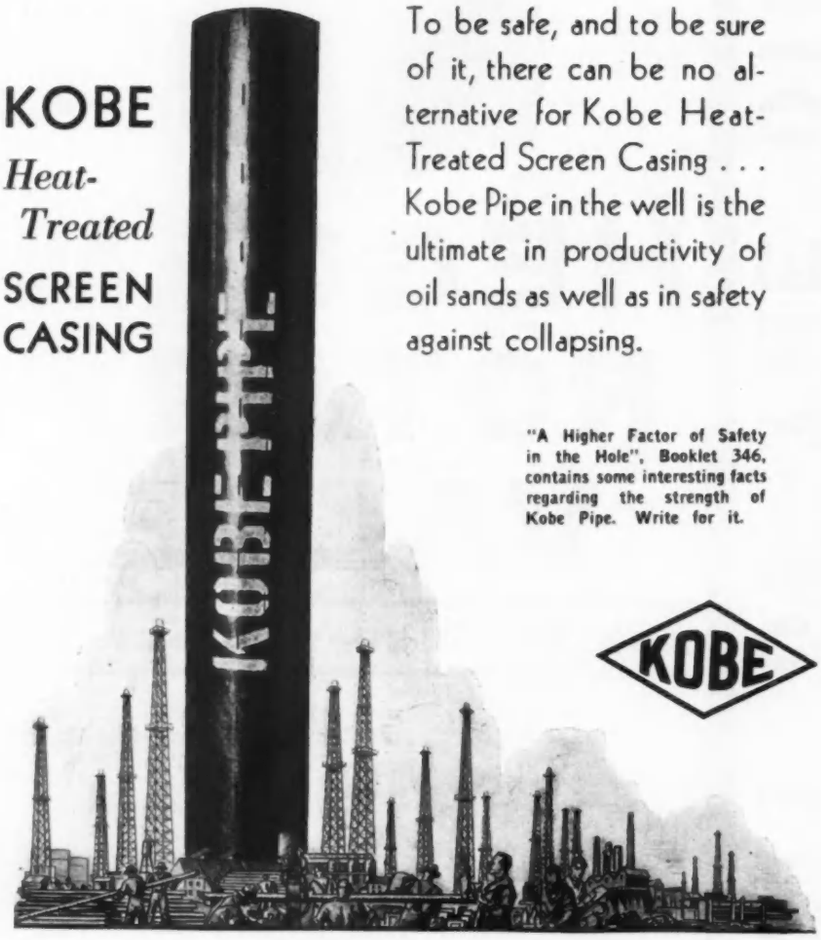

"A Higher Factor of Safety in the Hole", Booklet 346, contains some interesting facts regarding the strength of Kobe Pipe. Write for it.

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Reports of the week were as follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
CARTER COUNTY—		
Lloyd Oil Co., Higgins 1, ne ne nw 36-1s-3w	*	3146
CREEK COUNTY—		
Turner Brothers, Pope 1, sw sw ne se	10	1800
Williams et al, Livingston 1-A, cw½ sw se 36-17n-9e	12	1148
Comail Oil Co., River Bed 5, nw nw sw ne 8-18n-7e	60	2515
Suppes & Thomas Swingle 1, ne ne sw ne 16-18n-8e	15	2762
J. O. Shaffer et al, Burris 1, ne ne sw ne 31-18n-8e	*	2950
F. L. Marrs, Wilson No. 2, 3 ne ne ne se 34-18n-8e	10	1268
HUGHES COUNTY—		
Mid-Continent, I. Harjo 3, ne ne se 9-7n-8e	*	1097
Royce, Warren 1, cn¼ se 28-7n-8e.	*	1530
LINCOLN COUNTY—		
Stanolind et al, Rice 5, se ne ne 11-14n-3e	abn.	lcn.
Magnolia, Gilliam 7, sw se sw 8-14n-4e	*	5028
MARSHALL COUNTY—		
R. A. Godfrey, Burge 2, ce½ nw se se 25-7s-5e	35	541
McCLAIN COUNTY—		
Carter Oil, Hanner 1, sw ne sw 24-5n-1w	*	6526
OKFUSKEE COUNTY—		
Olean, Fish 3, se ne nw 36-10n-11e	40	3209
OSAGE COUNTY—		
Lewis Production, (Unknown) 4, sw nw ne 28-24n-7e	260	2697
Skelly Oil, (Unknown) 3, ne ne se nw 28-24n-7e	268	2677
Elfred Beck et al, (Unknown) 1, sw sw sw 13-24n-8e	40	2209
Midco, (Unknown) 3, se sw nw 10-25n-6e	775	2845
Midco, (Unknown) 4, ne ne nw 10-25n-6e	2567	2753
Phillips Pet. Co., (Unknown) 2, se se nw 15-25n-6e	274	2805
J. A. Morrison, (Unknown) 2, se ne se se 35-25n-11e	35	1664
Reva Oil Co., (Unknown) 2, ne ne se se 30-28n-11e	10	1346
PAWNEE COUNTY—		
S. Martin, Cotton 2, se se se sw 6-20n-8e (owdd)	*	2755
PAYNE COUNTY—		
Mulberry O&G, Fisher 3, nw se ne 27-19n-4e (owdd)	*	3944
PONTOTOC COUNTY—		
Manahan, Wagner 2, se ne se 18-2n-7e	*	71
Crosley et al, Davis-Harden 1, sw sw ne 30-2n-7e	¶38-45	1820
POTTAWATOMIE COUNTY—		
Kidney, Myers 1, sw ne nw 6-7n-4e.	lcn.	abn.
Seminole Supply, McGee 2, nw sw nw 10-7n-4e	202	3755
Darby et al, Meadow 1, cne sw 19-9n-5e	268	4105
SEMINOLE COUNTY—		
Carter, Kiker 2, ce½ nw sw 2-9n-6e	249	4025
Carter, Chowning 5, sw sw sw 19-9n-6e	*	2762
Carter, Keokuk 3, cn½ sw ne 2-10n-6e	1925	4148
STEPHENS COUNTY—		
Mudge Oil Co., F. M. Wood 32, nw nw nw nw 26-1s-5w	7	696
Lewis Sikes, Mulkey 1, cne 16-1s-8w	40	2047
W. E. Thurlo, Gilmore 2, sw nw ne se 10-2s-5w	abn.	lcn.
Owl Oil Co., Billey 20-A, cs½ ne 9-3s-5w	2	425
TULSA COUNTY—		
Misner et al, Hodge 5, cn½ ne nw 8-17n-14e	abn.	lcn.
A. B. Ice, Flippen 1-A, sw sw ne sw 28-18n-14e	*	1470
WAGONER COUNTY—		
McIntire et al, Tiger 5, se se ne nw 2-17n-15e	50	1100
B. G. Goble, Lovett 6-A, sw sw ne sw 35-18n-15e	*	1101

*Failures; †Junked; ¶Million cu. ft. gas.

New Cherokee County Pool Conceded to Have Large Area

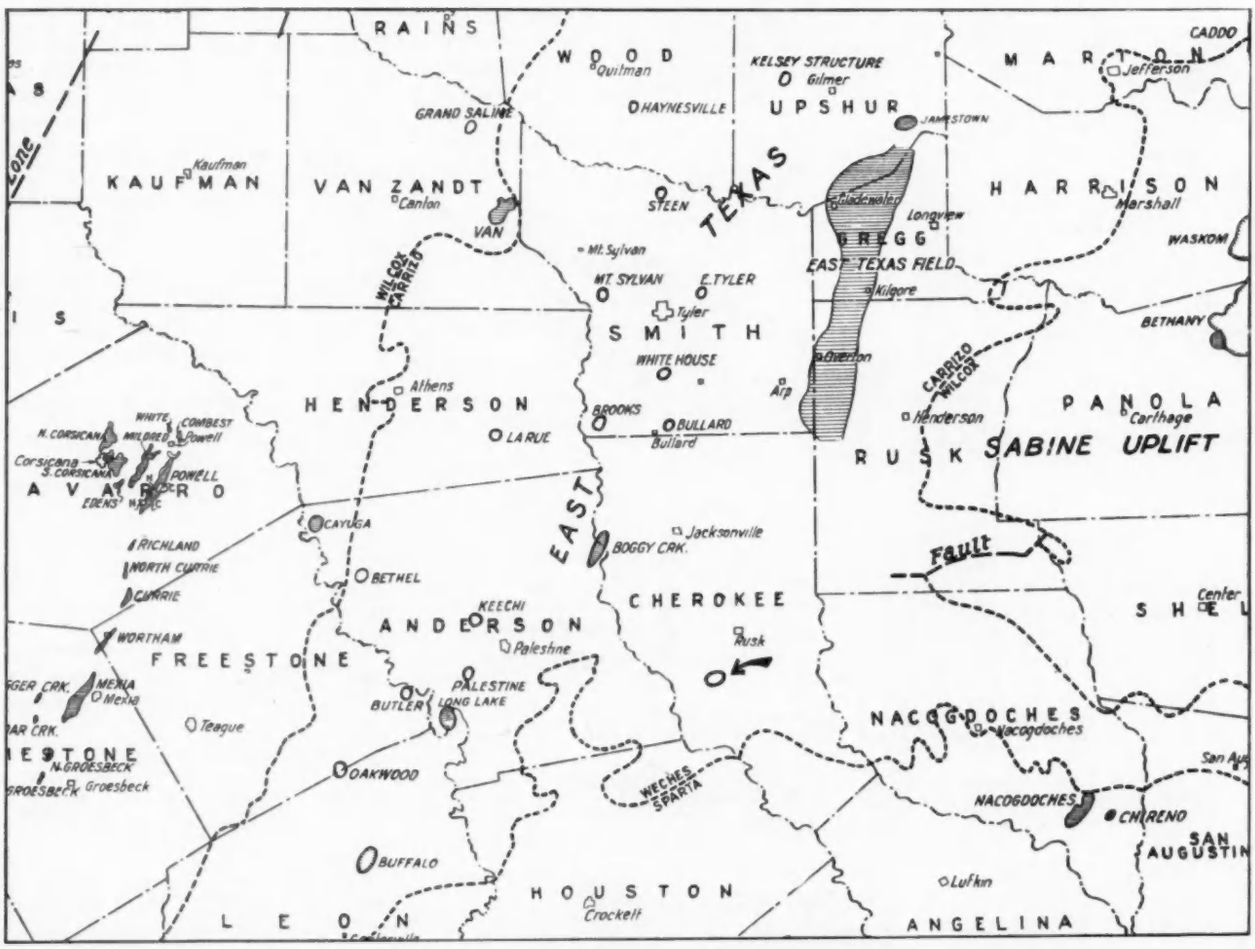
Palestine, Texas.—A large productive area for the new oil field uncovered June 3 in west central Cherokee County by J. T. Wood, Houston operator, and associates' New Birmingham Development Company 1 in the south portion of the Woodbine sand belt of East Texas is generally conceded by geologists conversant with structural conditions surrounding the latest of a series of oil and gas strikes made to the west and northwest in recent months. The first accurate gauge of the well credited it with an hourly flow of 30 barrels of 40 degree gravity pipe line oil, comparable with that produced in the East Texas field, through three quarter-inch choke on tubing at a total depth of 5125 feet. Considering the back pressure recorded during each gauge taken through tubing it is believed to be capable of producing 5000 barrels daily.

This new field is to be known as the Rusk area, so designated because of its being about six miles southwest of Rusk, the only town in the general area. It is about 35 miles southwest of nearest production in the East Texas field, which overlaps into the northeast corner of Cherokee County, and about the same distance east of the Long Lake oil and gas field, southwestern Anderson County. In spite of the well's isolation from other fields it has been provided with a pipe line connection and market outlet through construction of a three-mile four-inch line by The Texas Pipe Line Company, which has an eight-inch trunk line connecting its Mid-Continent and Arkansas-Louisiana systems between Corsicana and San Augustine stations. Pure-Van Pipe Line Company and Gulf Pipe Line Company also have lines in close proximity to the new field.

Major companies were entering bids to acquire the wildcat producer and about 1100 acres of scattered leases held by Wood et al, and a special production test in earthen pits was given representatives of Humble Oil & Refining Company prior to the completion of lease tankage, which had not been provided in advance of the completion of the well. The latter company will in all probabilities acquire the well, else a substantial portion of the nearby leases.

Humble Buys Lease

Humble Oil & Refining Company is credited with having acquired from Wood and others a lease on the Powell Lumber Company 161-acre tract, I&GN Ry. Survey, located southeast of the discovery well, paying $1000 cash and $1000 additional in production. The latter are also negotiating with the above company for the sale of additional tracts out of the discovery block. The Texas Company is reported to have made a location to drill a test immediately near the southwest corner of the survey bearing the discovery well. C & G Oil Company, headed by



Showing Location of New Cherokee County Etrike

E. B. Germany, Dallas, has contracted to start operations on a wildcat about one mile east of the town of Rusk by June 17 in purchasing 600 acres of leases from the New Birmingham Development Company, paying a cash bonus of $9000 for the tracts. The location to be drilled is in the southwest corner of the J. Gibbs or T. F. Timmons Surveys. This wildcat is about 5½ miles northeast of the producer and is being drilled on the theory that the field will extend beyond the Gibbs Survey.

Wood et al's New Birmingham 1 is located 150 feet from the north and west lines of 160-acre lease, occupying the northeast corner of the Levi Jordan Survey. It is on one of five 160-acre checkerboard leases donated by Shell Petroleum Corporation out of its original 8000-acre block to induce Wood and associates to make the test. Wood et al expanded their block after coring into the Woodbine sand horizon on May 19, having had little success in selling off acreage protection to others to aid in financing the project. The well logged Pecan chalk at 3985-4306 feet, and top of Austin chalk at 4840 feet, with an elevation of 432 feet. The base of the Austin has not been definitely established, although only a trace of Eagleford shale was encountered before entering the Woodbine section at 5116 feet. Seven-inch casing was cemented at the latter depth, leaving only nine feet of exposed producing formation.

This Cherokee County wildcat producer centers on a surface and subsurface high that responded favorably to geophysical surveys, but when the log is correlated with the markers on dry holes drilled to the west and southwest about four and six miles, respectively, the needed relief to attain a producing structure appears lacking. This condition gave rise for some authorities to forecast that a shore line condition somewhat similar to that found in the giant East Texas field, but of a smaller caliber, may exist in the Rusk area. Others maintain that their geophysical data on the area points to a circular shaped structure, extending westward almost to the Cranfill-Reynolds Company's (General Crude Oil Company) Southern Pine Lumber Company 1, SEc 180-acre lease, Nancy Arrington Survey. The latter topped the Woodbine sand at 5147 feet; first red beds at 5169 feet, and was abandoned as a salt water well last January 2 at 5176 feet, or 4828 feet below sea level.

Lease and royalty trading by companies and operators in the south end of the Woodbine sand belt has been greatly stimulated by successful completion of the Cherokee County wildcat, with activity largely centered on Anderson, Cherokee, Henderson, Freestone and Houston Counties. Drilling blocks are becoming difficult to assemble in likely territory because of the series of buying campaigns staged at intervals since last fall when the Long Lake and Buffalo areas proved for the first time that oil or gas production could be developed from the lower end of the Woodbine belt.

Cherokee County is popular with the lease buyers and geophysical exploration parties now that the south part of the county has been removed from the doubtful stage on deep production. The northeast corner of the county shares to a limited extent in the production of the giant East Texas oil field.

Both Anderson and Freestone Counties are being canvassed by lease buyers for blocks and checkerboard lease protection, and a number of additional tests are expected to follow the renewed activity. Rio Oil Company is expected to announce location for the drilling of a test on its wildcat block near Fairfield, Freestone County, centering on the W. M. C. Jones Survey. Another block near Lake Chapel and north of Fairfield is being assembled, presumably by Tide Water Oil Com-

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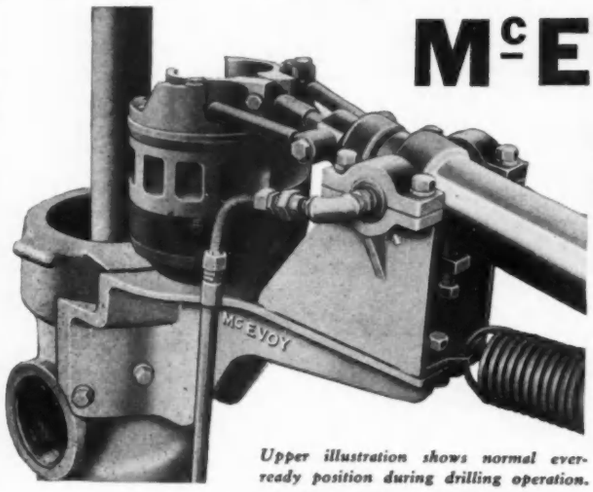

Upper illustration shows normal ever-ready position during drilling operation.

Lower illustration shows assembly forced to sealing position by collar around pipe.

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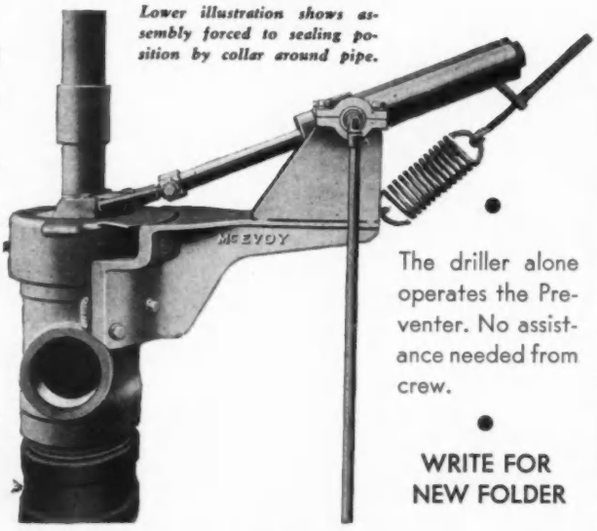

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pany and Texas Seaboard Oil Company, who have two discoveries to their credit in Anderson County since last fall. This block centers on the J. S. Claypool, Jas. James and W. B. Reed Surveys. It is rumored that the above two companies have entered into contract with Humble Oil & Refining Company, whereby the latter will bear one half the cost of maintaining shooting parties in the district and subscribe to a similar percentage of the lease and royalty expenditures made on the strength of geophysical information developed. In former years Humble Oil & Refining Company operated in the district with Gulf Production Company on a somewhat similar basis.

Territory located about 7½ miles northeast of Palestine, Anderson County, has been invaded by a group of brokers, presumably buying for the above companies, and paying from $3 to $10 per acre cash bonuses. This activity centers on the Wm. Elliott and H. W. Dikes Surveys. Sun Oil Company is also credited with buying in this area. McElreath-Suggett et al have assembled a block situated southwest of Tennessee Colony, Anderson County, extending southwest across the Trinity River into Freestone County. Humble Oil & Refining Company is reported to have paid $10 per acre for about 850 acres of scattered leases straddling the Anderson - Houston County line and about five miles east of Salmon. Humble Oil & Refining Company is paying from $10 to $20 per acre for leases near Frankston, located in extreme northeast corner of Anderson County, and due south of a large block scheduled to be explored by Cosden Oil Corporation within 90 days, according to officials of the latter concern.

Resumption of exploration work in the Long Lake field, which has not been defined, but yielded three gassers and two small oil producers from the first five tests drilled on the discovery block, is to be staged shortly. Hunt Production Company has contracted to drill about 2½ miles northeast of production on the A. L. Temple-C. A. Miller 196.64-acre tract, Simon Sanchez Survey 2-10. Nearby lease owners have contributed towards the drilling of this prospect. Territory located down the Trinity River from this field and near Navarro Crossing is to be explored by Sun Oil Company's Robt. N. Erskine 1, located on a 5,203.48-acre lease, or 2000 feet north of the south line of the Samuel C. Box Survey and 3000 feet east of the river.

Four wildcat failures were recorded in the Woodbine belt last week. Byrd-Frost, Inc.-Stanolind Oil & Gas Company's Alice Scott-Pure 1, near Slocum Anderson County, was ordered plugged at 5554 feet after an unsuccessful attempt at developing a commercial oil producer from Woodbine sand that showed oil and salt water at 5455-5501 feet. Belief prevails that a field exists in this immediate area. Another wildcat failure for Anderson County was that of Jameson-Byorn and Wm. C. McGlothlin on the S. N. Price 6¼-acre tract, J. J. Y'Barbo Survey, near Springfield, as it was abandoned in shale at 5217 feet without reaching the Woodbine. Smith County's contribution to the dry hole list was Hunt Production Company's Henry Rayford 1, J. L. Dillard Survey, located midway between Tyler and the East Texas field. It tested salt water in the Woodbine sand topped near the 3950-foot level, and quit in lower Woodbine sand at 4054 feet.

A spirited lease and royalty buying campaign was staged around the Wood County wildcat test of McElreath-Suggett Oil Corporation on the B. D. Holley 43.2-acre tract, Thos. M. Moore Survey, just prior to its penetration of the Woodbine sand, which carried salt water at 4490-4638 feet. Presence of oil stained sands in the sub-Clarksville formation above the Woodbine prompted the buying, with one Dallas independent company credited with having spent about $13,000 for leases and royalties.

Among the new wildcat locations made public last week, both Hopkins and Hunt Counties scored one each. In the former county, D. A. Hale et al have erected derrick to drill in the NEc of the L. M. Hall 70-acre tract, A. Karo Survey, A-143. It is located in the southwest part of the county and near Miller Grove. Hunt County's new addition was gained by John E. Golden and the G. S. & S. Company's Oscar Popper 1, Jas. Moore Survey. It is on a block of about 13,000 acres, centering about five miles northwest of Greenville. H. O. Shawver, Greenville, and others' J. H. Jones 1, Lydia Ferguson Survey, located about 6½ miles northeast of Greenville, attracted the attention of lease and royalty buyers when the lower Woodbine sand was cored at 3078-3108 feet, with an elevation of 555 feet. The owners have cemented seven-inch pipe at 3021 feet to test this sand.

Cayuga Field Receives Important Extensions

Fort Worth, Texas.—Width of the Cayuga field, northwestern Anderson County, was virtually doubled late last week when the west side outpost test of Roeser-Pendleton, Inc., on the Nowyer tract, cored Woodbine sand at 4034-4047 feet showing evidence of oil and gas. At the latter depth it was 3432 feet below sea level, or about 50 feet above the accepted average water level of the field. The owners plan to take an additional core before running casing to complete. This test is the highest structurally in the field, and was showing for an abnormally high well until it encountered a thick Eagleford shale section.

Tide Water Oil Company and Texas Seaboard Oil Company's J. N. Edens 2, extended the productive limits of the field about 3750 feet to the south when it gauged 23 barrels oil per hour through one quarter-inch choke from sand at 4024-4051 feet. It has a sub-sea depth of 3771 feet and was halted at the base of the sand horizon rather than to risk bottom hole water.

Roeser-Pendleton, Inc.'s V. W. Bowyer 1 is two locations north of the southeast corner of 200-acre lease, Everett Ritter Survey, and about 7000 feet west of production on the discovery block. In the event it proves to be an oil producer it will prove up the field in an east and west direction for about 13,000 feet, or the same distance now proven in a north and south direction. Bowyer 1 registered an abnormal rise in the structure to the west in all markers, having encountered first soft Pecan chalk at 1965 feet, and first hard chalk at 2070 feet, while Austin chalk was logged at 3086-3437 feet. It has an elevation of 315 feet.

The first failure for the field, reported last week as being in prospect, was experienced by J. R. Meeker, Fort Worth, et al, on the H. H. Duncan 12½-acre tract, A. Enes Survey, after testing salt water in the Woodbine sand at 4163-4192 feet. It is located about 2500 feet east of nearest production, and offsets acreage included in the discovery block. A number of small operators were deprived of an opportunity to share in the production of the field because of this unexpected dry hole. It has an elevation of 363 feet.

C. A. McCOLLUM, resident manager for National Supply Company with headquarters at Houston, announces the removal of his offices and the offices of the city and district sales departments to 1309 Second National Bank Building. These offices were formarly located in connection with the company's warehouse at 2000 Nance Street.

W. F. KNODE, former chief petroleum engineer for the Texas Railroad Commission, has resigned, effective July 1, to enter consulting engineering work. He will establish headquarters at Corpus Christi, Texas.

Ninety Completions Made in East Texas

Tyler, Texas.—Bolstering its position as the most active drilling center, the East Texas field scored 90 completions during the past week, including 89 flowing and pumping wells and a failure on the east side of the field in North Gregg County. Major companies contributed 43 of the completions.

The extreme north end of the field, referred to as the Jamestown area because of being apparently cut off from the giant field by several dry holes and also for the reason that oil production is found at a greater sub-sea depth, is rapidly becoming one of the most active drilling sectors. Eastern Texas Petroleum Company, a new production unit formed by Freeman W. Burford, Dallas, et al following the sale of all producing properties of East Texas Oil Refining Company to Magnolia Petroleum Company, proposes to drill approximately 50 new tests in this area. The Company's D. F. Smith 1, located on the south line of 640-acre lease and also the T. J. McKey Survey, and about 1300 feet north of production, was completed last week flowing 50 barrels oil per hour through open tubing, with 350 pounds working pressure, from Woodbine sand at 3573-3578 feet. It has an elevation of 248 feet, thus placing the top of the sand at 3325 feet below sea level. Burford interests have acquired half interests in about 1200 acres in this area from Frank Buttram et al, and also has contracted for a similar interest in a producing well and acreage held by Otto L. Morris, Fort Worth, et al.

Jamestown Area

A movement is certain to be launched shortly to have the Texas Railroad Commission designate the Jamestown area as an entirely separate field, and set up a different proration program that will afford a higher allowable per well.

Sun Oil Company's T. G. Pressley 3, located in Northern Gregg County, overstepped the dead line for production, and failed to produce after being given a shot at 3685 feet. Elsep et al's G. S. Mattox 1, D. Sanches Survey, approached the deadline for production in the same area in recording a small flowing well at 3686 feet, with an elevation of 403 feet.

Detailed list of completions in the East Texas field during the past week follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
A. A. Oil Co., Geo. Curbo 1 (160-ac)	¶1-25	3698
Atlantic Oil Prod. Co. (was American-Liberty) J. E. Arnold 3 (35-ac)	4000	3700
J. E. Arnold 4 (35-ac)	6000	3726
I. L. Kinney 17 (336-ac)	3800	3684
Baldwin-Sultan Oil Co., M. L. Thompson 3 (10-ac)	9000	3721
Haynes Oil Corp., Clark Lee 10 (73.6-ac)	10,000	3633
Humble, J. R. Box 13 (165.72-ac)	6000	3732
S. A. Glover 6 (59.44-ac)	4500	3733
Kangerga 41-A (330-ac)	8000	3679
W. B. Kee 10 (95-ac)	9300	3699
H. A. Piercy 12 (138.34-ac)	9200	3732
W. L. Price 39 (432.05-ac)	8500	3803
Heywood White 4-A (49¾-ac)	8000	3775
I. W. Wooley 20 (201.53-ac)	11,000	3685
Hunt Prod. Co., J. M. Finney 5 (32-ac)	250	3680
M. L. Thompson 4 (19-ac)	7000	3760
I. R. Thrash 7 (57.33-ac)	11,000	3776
K. O. T. Oil Co., S. S. Cook 4 (46.66-ac)	6000	3734
Louisiana Oil Ref. Corp., H. Kersh 4 (79.65-ac)	10,000	3608
Maco Oil Co., Mayfield-Alford 4	4200	3680
Magnolia Pet. Co., Roy Loosier 14 (137.7-ac)	9400	3684
Alex McCutchin et al, H. Clay 1 (16-ac)	1000	3650
Miller Prod. Corp., D. Bradford 1-A (34-ac)	5500	3618
D. Bradford 8-A (34-ac)	1000	3600
Ortiz Oil Co., H. M. Hale 5 (40-ac)	720	3732
Sinclair Prairie Oil Co., Mayfield-Alford 14-B (149-ac)	9800	3630
Sun Oil Co., J. D. Henson 17 (216½-ac)	6000	3654
E. M. Thomason & Co., Inc., M. L. Thompson 3-A (10-ac)	6500	3731
Trico Oil Co., R. A. Motley 3 (20-ac)	7000	3734
KILGORE AREA—		
A. A. Oil Co., A. A. Lockhart 1	8000	3657
A. B. C. D. Oil Co.-Johnson & Burnham, J. L. McNeeley 5 (17-ac)	7100	3630
Bay Oil Corp., W. P. Moore 8 (106.63-ac)	7800	3763
B. B. Peterson 8 (80.65-ac)	9000	3623
J. Beren et al, A. Holt-Shell 4 (69.17-ac)	5500	3773
J. Brown Cutbirth et al, R. D. Register 3 (3.38-ac)	9000	3647
Darby Pet. Co., C. O. Christian 12 (117-ac)	12,000	3750
DeArman & L. O. McMillan, Alex Strong 5 (26-ac)	7600	3672
Devonian Oil Co.-Gulf, R. A. Motley 26 (442-ac)	6800	3749
M. T. Flanagan Prod. Co., M. Kennedy 3 (20-ac)	7200	3742
Friedman Oil Corp.-Swindler, Mayfield Co. 7 (123-ac)	10,500	3717
Gen'l Crude Oil Co., S. Scott 10 (37½-ac)	7600	3636
Gulf Prod. Co., H. C. Alexander 20 (209-ac)	9000	3539
Hosea Baton 3 (56¾-ac)	3600	3628
S. Hilburn 55 (269.74-ac)	7300	3580
A. Laird 11 (54.31-ac)	7600	3604
A. Muckelroy 14 (152.05-ac)	7800	3589
Humble, J. N. Peterson 24 (222.1-ac)	9500	3630
Dora Thomas 13 (59.01-ac)	8400	3600
S. S. Laird Oil Co., J. N. Peterson-Karona 5 (25-ac)	12,000	3623
Magnolia Pet. Co., John Radford 24 (252-ac)	10,000	3628
Paul L. Miller et al, Laird Bros. 2-A	10,300	3575
J. W. Pearce et al, Tom Shaw 1-B	250	3555
Yandell Rogers et al, S. Williams-Humble 1	25	3662
Sam P. Shelburne et al, W. B. Walker 1 (174.3-ac)	5400	3573
Shell Pet. Corp., N. Jobe 8 (60-ac)	7300	3554
Sinclair Prairie, A. A. King 16-B, Tr. No. 5 (147-ac)	9300	3469
Stanolind O&G Co.-Crosby, Ben Laird 7 (40-ac)	8100	3669
Stodel Oil Co., Dee Smith 7 (24.06-ac)	6800	3610
Dee Smith 8 (24.06-ac)	6700	3600
Sun Oil Co., J. R. Beall 14 (180-ac)	8900	3602
M. K. Towns et al, Grif Davis 4 (10-ac)	8000	3602
Joe Zeppa, Tr.-Delta Drl. Co., M. Charles-Webster 2 (8-ac)	7200	3648
LONGVIEW AREA—		
Arkansas Fuel Oil Co., E. M. Whatley 4 (43.91-ac)	6500	3539
Atlantic O. P. Co.-Sun Oil Co., Wm. Anderson 7 (83-ac)	11,000	3525
Bishop Oil Corp., B. C. Todd 7 (28.99-ac)	9400	3593
Elsep et al, G. S. Mattox 1	100	3686
Empire Gas & Fuel Co., Joe Bander 11 (93.3-ac)	7500	3632
J. T. Jeter 8 (118-ac)	9100	3629
T. W. Lee 21 (187.18-ac)	10,500	3575
Everetts-Simmons (was H. L. Goodson), Gladewater City 1	10,000	3645
Faith Oil Corp., J. J. Fuller 7 (46.45-ac)	5800	3714
Gulf Prod. Co., S. C. Fishburn 17 (200-ac)	8100	3508
Humble, J. F. Boles 15 (100.5ac)	5800	3616
J. H. Sheppard 3-B (8-ac)	7300	3608
Inland Oil Co., M. Fenn 5-B (17-ac)	8300	3643
A. D. King et al, D. T. Lloyd 3 (6½-ac)	9100	3736
Magnolia Pet. Co., Carrie Brooks 5 (50-ac)	8500	3649
R. L. Saulter 7 (55-ac)	10,600	3646
G. P. Mitcham et al, J. W. Free 2 (14-ac)	4000	3679
Mudge Oil Co., J. W. Free 12-A (105-ac)	7600	3700
Root-Rhodes Oil Co., E. W. Clements 2 (6.7-ac)	8800	3568
Shano Oil Co., B. Doby 8 (43-ac)	8200	3744
Shell Pet. Corp., W. T. Burnside 17 (160-ac)	8600	3545
Skipper-Bivins Oil Co., M. Magrill 3 (12-ac)	9000	3695
Smith County O&G Co. (Ike Rudman), M. Fenn 2 (3.66-ac)	7000	3669
Stanolind O&G Co.-Simms Oil Co., O. J. Albright 9 (90-ac)	8700	3557
Stanolind-F. W. Sternenberg, G. Jones Nash 5 (30-ac)	9700	3659
Sun Oil Co., T. G. Pressley 3 (49-ac)	*	3685
V. J. Watkins 4 (42.2-ac)	1000	3675
Texas Oil Products Co. (was Kent Oil Co.), Sabine River 2, Tr. No. 2	9000	3588
Tide Water Oil Co., A. Davis 14 (133.8-ac)	11,500	3587
E. M. Nettleton 12-A (100-ac)	8000	3544
W. C. Turnbow Pet. Co., J. C. McKinley 2 (16-ac)	8600	3627
Woodley Pet. Co., K. Mosley 2 (8-ac)	6700	3472
Miscellaneous Completions		
CAYUGA (Anderson County)—		
Barnsdall Oil Co., W. L. Tubbs 1	6500	4089
J. R. Meeker et al, H. H. Duncan 1 (12½-ac)	*	4192
Wildcat Completions		
ANDERSON COUNTY—		
Jameson-Byron & Wm. C. McGlothlin, S. N. Price 1	*	5217
Byrd-Frost, Inc.-Stanolind O&G Co., Alice Scott-Pure 1	*	5501
WOOD COUNTY—		
McElreath-Suggett Oil Corp., B. D. Holley 1 (43.2-ac)	*	4627
SMITH COUNTY—		
Hunt Prod. Co., Henry Rayford 1	*	4054

*Failures; †Junked; ¶Million cu. ft. gas.

Ector County Producer Calls for More Drilling

San Angelo, Texas.—Further extensions for the North Cowden field, Ector County, are to be sought by the Landreth Production Corporation as result of its success in developing a 500-barrel flowing well about three quarters of a mile south of the field proper last week when Texas Pacific Land Trust 1-A, NEc NW Section 3, Block 43, penetrated saturated lime at 4120-4204 feet. Operations were halted at the latter depth to await completion of pipe line connections by Humble Pipe Line Company, but is planned to drill through the present pay zone. The well has an elevation of 3062 feet.

Landreth Production Corporation has started rigging up to drill in the northwest corner of the same tract, and has also made location for Texas Pacific Land Trust 1-C, located in the NWc NW Section 11, Block 43, or one mile southeast of the above producer. The company is also drilling below 3650 feet on Texas Pacific Land Trust 1-B, NWc SW Section 3, or half-mile southwest of its producer. Each of these new tests will require three offsets in the event production is attained, while Stanolind Oil & Gas Company and Continental Oil Company are preparing to offset the well now in process of completion.

The North Cowden field has approximately 8000 acres proven for production in the 4200-foot lime horizon, which is equivalent to the upper and most productive pay in the South Cowden field. There are 13 wells on production, with a proration allowable of 1100 barrels daily. This production is apportioned equally on a basis of average 40-acre unit potential, and acreage. Development calls for one well to 40 acres.

A revival of activity in the Gulf-Waddell field, northeastern Crane County, is to follow the semi-completion of Wahlenmier Petroleum Corporation et al's Will P. Edwards 1, SWc NE Section 12, Block B-23, P. S. L. Survey, rated good for 60 barrels daily on pump after plugging back from 3720 feet to 3705 feet for a shot of 120 quarts of nitro at 3490-3525 feet. Original plans were to abandon this wildcat, which is 1½ miles east of Gulf Production Company's shut in producers on the Waddell ranch. The latter has been paying lease rentals in lieu of operating its small wells. In view of the promise of a commercial pumper by the outpost test, Gulf Production Company has made location for E. N. Snodgrass 1, C NW Section 1, Block B-25, P. S. L., or about 1¾ miles south of Edwards 1.

An initial rating of 500 barrels daily was attained by the Fuhrman Petroleum Corporation's W. H. Boner 1-B, C NE Section 25, Block A-43, Andrews County, after being shot with 450 quarts of nitro at a total depth of 4493 feet. It is the third completion for the company in the area, which it discovered in October, 1930, but was without a pipe line connection until late last year. Humble Oil & Refining Company's Kuykendall 1, located in the old Deep Rock area, drilled into sulphur water at 4511 feet, and has started plugging back after passing up a small oil producer in the regular lime horizon. This company's R. M. Means 1, wildcat in the northeast part of Andrews County, was drilling with rotary below 3600 feet.

Little progress was made by Gulf Production Company's J. T. McElroy 103, Upton County, during the past week because of making repairs to drilling equipment. However, drilling was in progress below 10,290 feet late last week. Humble Oil & Refining Company's White-Baker 1, Pecos County, wildcat, was coring below 9700 feet after testing dry on drill stem test at 9614-9688 feet.

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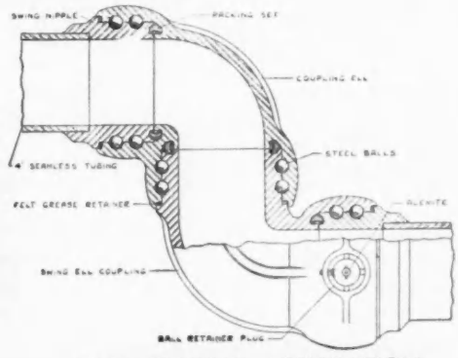

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North Texas Has High Percentage of Failures

Wichita Falls, Texas.—The ratio of dry holes to oil producers among the 57 completions in North Texas during the past week came up to a high mark after averaging about one-third of the total for some weeks. There were 24 dry holes listed for the period, and 33 pumping and flowing oil wells yielded an aggregate of 7223 barrels of oil and 5,000,000 cubic feet of gas on initial gauges.

The volume of new production was inflated by the completion of The Texas Company and Sun Oil Company's Les K. Johnson 4, second oil and gas well for the Navarro structure, Foard County, from Canyon lime horizon at 3591 feet.

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Bonner Oil Co., Abercrombie 9-E, Blk. 154	75	1142
Bridwell Oil Co., Falls County 6-E, Blk. 20	18	1102
Falls County 7-E, Blk. 20	80	1111
Burk Royalty Co., W. I. Pace 1	120	1169
W. I. Pace 3	150	1173
L. T. Burns et al, J. J. Perkins 1, Sec. 10	70	1601
J. J. Perkins 2, Sec. 10	200	1605
Cable Oil Co., S. Webb 3, Blk. 4	15	749
Carey & Carey, Falls County 5, Blk. 4	20	1205
Barney Cockburn et al, T. V. Carr 1, Sec. 2437	20	1379
Cullum & Alexander, Falls 4-A, Blk. 19	450	1098
Cullum & Sinclair-Prairie, Falls-Scranton 6, Blk. 17	40	1126
Falls-Scranton 7, Blk. 17	530	1123
Fresno Oil Co., H. O. Prideaux 33, Blk. 19	8	650
Golding & Cochran, G. A. Lauster 13, Sec. 2	*	1324
C. E. Wilhelm 1, Sec. 2420	*	1410
King & Beasley, W. L. Andrews 1, Blk. 2	*	1070
W. T. Knight et al, C. Campbell 2	5	1212
W. F. Krause et al, Archer County 1, Sec. 1832	*	1004
J. M. McLester et al, J. Purcell 1, Blk. 81	*	1233
J. H. Massie et al, A. P. Nichols 2-B, Sec. 30	5	1598
Bo Minniach et al, J. A. Love 1, Sec. 2	*	1392
W. H. Morrison et al, M. P. Andrews 3, Sec. 1825	*	950
A. P. Nicholson et al, Mrs. M. Taylor 4, Blk. 20	*	725
Perkins-Cullum Oil Co., Falls-Tiktin 17, Blk. 12	25	1161
Falls County 9-A, Blk. 19	200	1088
Falls County 10-A, Blk. 19	450	1101
Falls County 9-C, Blk. 6	250	1168
Petroleum Producers Co., B. C. Andrews 3	*	976
Pois-Schultz-Weaver, F. C. Green 24	300	1170
Rathke Oil Co., Benson 5-A, Sec. 1808	40	944
M. Staniforth et al, J. T. Richardson 1, Blk. 17	200	1442
CLAY CONTY—		
Metzner & Gerard, Thornberry 6, Blk. 6	*	360
COOKE COUNTY—		
E. J. Ruwaldt et al, Andress 1	80	1389
FOARD COUNTY—		
The Texas Co.-Sun Oil Co., L. K. Johnson 4	¶5-3000	3591
JACK COUNTY—		
H-Y Oil Co., D. R. Sewell 1	*	340
Dan E. Whatley et al, J. H. Shown 1, Blk. 1	30	290
J. H. Shown 3, Blk. 1	*	350
MONTAGUE COUNTY—		
O. V. Beck et al, C. L. Davenport 2	500	1704
Bridwell Oil Co., J. G. Howard 1	*	2066
Schermerhorn O&G Co., B. H. Henley 1	*	1860
WICHITA COUNTY—		
Geo. W. Cooper et al, Fisher 1, Sec. 15	*	1580
H. I. Covert et al, K. P. Abernathy 1, Blk. 9	*	800
Petroleum Prod. Co., Allen-Kemp 35, Sec. 28	60	1500
WILBARGER COUNTY—		
M. L. Richards et al, Waggoner 1, Sec. 16	*	805
Luther Webb et al, Waggoner 7-E Sec. 22	180	1890
YOUNG COUNTY—		
G. A. Erickson et al, Adam Furr 1, Sec. 339	*	255
S. D. Glover et al, C. W. Johnson 11, Blk. 9	2	591
Golding-Cochran, A. Heatherly 2, Sec. 1461	*	912
W. F. Hamilton et al, Finch 13, Sec. 40	15	673
Iron Mt. Oil Co., Cole 3, Sec. 3403	*	725
Kimmell Lee & Co., R. Campbell 1, Sec. 1370	*	1000
Wm. Lenit et al, J. W. Davis 1	*	710
Regal Oil Co., E. Barrett 1	5	577
Starkey & Riggs, Ledbetter 2, Sec. 2248	*	707
White & Duncan, W. H. Greer 1, Sec. 77	*	1153
Wooten & Reed, Horton 6, Sec. 1906	40	606
Horton 7, Sec. 1906	45	611

*Failures; †Junked; ¶Million cu. ft. gas.

Completions in Winkler County Encouraging

San Angelo, Texas.—West Texas accounted for 10 flowing and pumping wells, with an aggregate of 53,210 barrels of new production, and three abandoned tests during the past week. This activity was scattered among eight counties. A single completion scored in the prolific section of the Yates field materially boosted the volume of new production.

The Scarborough field, northern Winkler County, gave further encouragement last week to operators conducting an active development campaign for high gravity oil afforded by the sandy-lime horizon, when Magnolia Petroleum Company's W. F. Scarborough 5, NEc SE NE Section 18, Block 74, P. S. L. Survey, flowed 613.29 barrels of oil natural on 18½-hour gauge from pay at 2830-2843 feet. The lime marker was topped at 2565 feet, and 8¼-inch casing cemented at 2578 feet. It was given a potential of 771.5 barrels daily. The company has started two more tests on the lease. Colonial Oil Company's Scarborough-Amerada 4 was completed several weeks previous at 2895 feet, flowing 890 barrels natural. Most wells are shot with nitro to complete, and average much smaller yield than the above two wells.

Three abandoned tests charged to the Yates field were due to Mid-Kansas Oil & Gas Company having elected not to drill to the saturated lime horizon because of being on units already on production.

Detailed list of completions in West Texas during the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
ANDREWS COUNTY—		
Fuhrman Pet. Corp., W. H. Boner 1-B	500	4493
FISHER COUNTY—		
Southern Oil Corp., D. E. King 1-A.	500	3128
GLASSCOCK COUNTY—		
Noble & Co., E. A. Lee-Pure 1	1545	2132
Shell Pet. Corp., J. J. Phillips 3	1400	2372
LOVING COUNTY—		
Wm. Little et al, Gehle-Richards 1	50	4275
PECOS COUNTY-YATES FIELD—		
Mid-Kansas O&G Co., Smith-Taylor 25	*	750
Fred Turner 1, Tr. 3	*	590
I. G. Yates 40-A, (1767½-ac)	*	680
I. G. Yates 34-B	47,800	1440
UPTON COUNTY-McCAMEY FIELD—		
TP Coal & Oil Co.-Humble, Sherk 3-B	300	2483
WARD COUNTY—		
Atlantic Oil Prod. Co., W. D. Johnson 17	270	2540
California Co., J. F. York 7	75	2530
WINKLER COUNTY—		
Magonlia, W. F. Scarborough 5	770	2843

*Failures; †Junked; ¶Million cu. ft. gas.

Two Producers Completed In West Central Texas

Ranger, Texas.—Completions in West Central Texas during the past week included only two shallow pumpers in Shackelford County with a combined initial output of 135 barrels of oil daily.

Detailed list of completions follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
D. R. Barley et al, R. W. Pentecost 1	*	1370
Humble, Kilgore 1-F	*	1325
Miller et al, H. L. Cannon 1, Sec. 17	*	595
CALLAHAN COUNTY—		
Lawson Oil Co., Alexander 8, Sec. 23	*	1037
SHACKELFORD COUNTY—		
Albany Oil Co., E. A. Jeter 10, Sec. 14	*	960
Knight & Ewing, E. A. Jeter 6, Sec. 14	100	1186
Reynolds & Richardson, Mathews 2, Sec. 34	*	1176
L. A. Warren et al, Mathews 1, Sec. 56	*	920
Worth Pet. Co., E. A. Jeter 4, Sec. 14	35	921

*Failures; †Junked; ¶Million cu. ft. gas.

Decline Registered by Panhandle Completions

Pampa, Texas.—Completions in the Texas Panhandle lagged behind the usual quota during the past week, with only one oil producer and two dry gassers reported. However, a large number of oil producers are in process of completion after being shot, and will reach the completion stage within the next two weeks.

Field work has been spurred into great-

er action as result of the proration allowable for the district having been raised to 56,800 barrels daily since last May 13. There are 1911 pumping and flowing wells sharing in this allowable.

Completions in Texas Panhandle last week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Skelly Oil Co., H. Schafer 28-W..	90	3106
GRAY COUNTY—		
C. Back et al, J. D. Back-Magnolia 1	¶8	2350
WHEELER COUNTY—		
Dumar O&G Co., P. Ftak 1	¶12	1903

*Failures; †Junked; ¶Million cu. ft. gas.

Gathering Line to Be Built in Cuevitas Pool

San Antonio, Texas.—Sun Oil Company will commence construction of a storage tank and gathering system in the Cuevitas field of North Starr County immediately. Upon the completion of these facilities, a 30 day test will be conducted to determine the production and possibilities of the nine oil producers in the field.

It recently was announced that the Sun Company would build a 120,000-barrel tank near the center of the lease, so it is supposed that this project will include the large tank. A four-inch gathering system also is included.

The company has two more wells drilling in the field at this time, both of which are in wildcat locations. M. Guerra 6-C is in the Sacatosa grant, Starr County, while Guerra 1-E, Share H 14, Cuevitas Grant, is in Jim Hogg County. Both wells are near the 2200-foot sand, producing level of the field.

The tests to be made of these wells will be of considerable interest in as much as production reports on wells have been nothing more than estimates. A very limited amount of storage is available in the field.

New Deep Sand Found in Cole Field

San Antonio, Texas.—A new deep, high gravity oil sand was established in the Cole field of Webb County last week by United Production Company. The well is Bruni Estate 1, bailing considerable 42 gravity oil from a sand at 3410-18 feet. The fluid level cannot be bailed below 2000 feet.

The well is about a mile south of the town of Bruni and is in the north corner of Block 42, Section 8, Adams Subdivision, Mariano Arispe Grant.

The rig will be skidded to a new location and a standard rig set up over the hole. The casing pressure is about 250 pounds closed in.

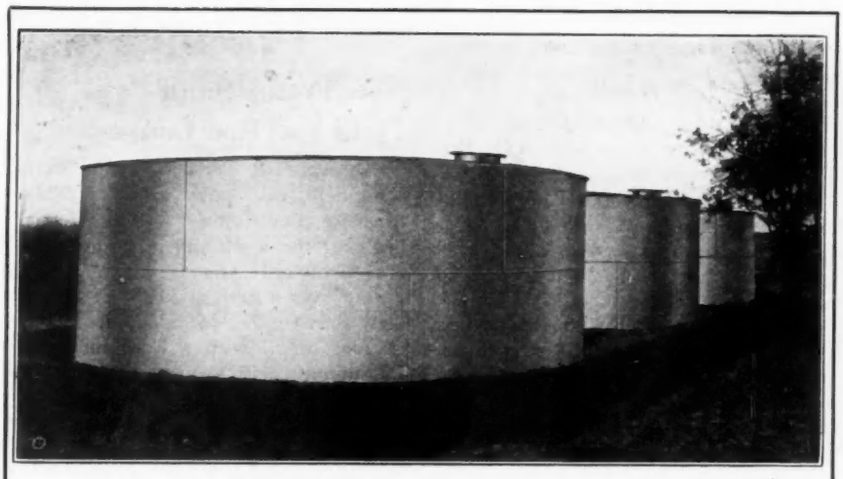
This well had a number of interesting sands below 2000 feet, several of which could have been completed as gassers, and two more which showed sufficient amount of oil to make some sort of a well.

It is about a half mile southeast of Allen and Morris' Bruni 1, Block 2, Section 5, which recently was completed at 2950-59 feet as a 4,000,000 cubic foot gasser spraying a little high gravity oil. The well showed 1100 pounds pressure.

Another Strike Made in Shallow South Texas Area

San Antonio, Texas.—Another wildcat strike headed a list of interesting events in the shallow district of northern McMullen and Live Oak Counties. Stewart and Ormby's Griffith 2, cored a saturated sand at 919-24 feet and set a string of 6⅝-inch casing at 914 feet.

This well is about two miles north of the Jacob pool and is 1100 feet due west of Loma Oil Company's Griffith 1, Griffith Farm tract No. 4. The



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Loma well showed for a small producer at this level.

The outcome of this well will likely bring about several more tests immediately.

About three miles southeast of this well, several new locations have become active in the recently discovered Marbach area, which has a 10,000,000 cubic foot gasser around 550 feet.

Several miles still farther south, Holmes and Goodwin are trying to set casing in Fee 1, B. Haugherty survey, to complete in a gas sand encountered just above 890 feet. The well blew out at this level.

Activity in Pettus Field Is Growing

San Antonio, Texas.—United Production Company's G. A. Ray 45, Bee County, first well to go below the regular producing horizon of the North Pettus field, is down 4125 feet and is scheduled to be carried to about 4500 feet, if another sand is not picked up at a lesser depth. It is south of No. 13, and 1399 feet south of the north line of the ranch, and in the southwestern portion of the field, which has been extended to embrace portions of Bee, Karnes and Goliad Counties.

The well was completed as a gasser in the regular sand (Top Pettus) at 3674-95 feet, registering 850 pounds casing pressure and 765 pounds tubing pressure. It picked up the lower Pettus sand at 3775-3819 feet, and again tested for a gasser. The Yegua horizon at 4033-46 feet, showed saturation in the core, but tested 31 fourbles of salt water on a four minute drill stem test.

Eight operations, divided between six operators, are reported in the field. These developments are the direct result of several important extensions to the proven area, which have brought about considerable offsetting.

Gas Showing in Two Refugio Wildcats

San Antonio, Texas.—Two prospects in Refugio County are attracting considerable attention as a result of heavy gas showings. One is at Bonnie View, while the other is east of the Greta-Fox-Refugio string of production.

Holland Oil Company's Peck 1 on a 10-minute drill stem test showed 400 pounds pressure with an odor of oil from a sand at 5330-37 feet. The test however, was made from 5321-37 feet. The well was cored to a total depth of 5351 feet, where the oil showing increased and a new drill stem test is to be made from 5337-51 feet. The entire section is sand with shale breaks and carries both oil and gas. The top of the Heterostegina was logged at 4437 feet in this well.

It is located in the northwest corner of the southwest Section 24, just 200 feet east of the Dixon et al's Peck 1, an old test abandoned at 4012 feet.

The other test is Quintana Petroleum Corporation's Thomas O'Conner 1, which showed 825 pounds pressure in 10 minutes on a quarter-inch choke from 4912-50 feet. The well is coring deeper. It is 286 feet from the southwest line and 159 feet from the southeast line of the J. M. Swisher survey No. 3, four miles southeast of the Greta field.

New Pettus Sand Field for Bee County

San Antonio, Texas.—A new Pettus sand field, one mile west of Tuleta townsite, Bee County, was in the making over the week end in Dirks Brothers' Skinner-Harris 1, which has set casing over a sand at 3950-73 feet. The well showed 290 pounds pressure and 60 feet of oil with a little mud on a five-minute drill stem test before casing was set.

The well is 160 feet from the north and east lines of the NW NW Section 10, Ragley Subdivision of the J. M. Uranga Grant. It is two and a half miles west of the Tuleta field and several miles southwest of the Pettus field.

The majority of the close in acreage is held by Dirks Brothers and E. M. Jones. Jones had drilled three wells in the immediate vicinity of this test, all of them, however, being to the east of the potential producer.

Angelita Field Showing Increased Activities

San Antonio, Texas.—Circle W Oil Company's E. H. Welder 1, second producer to be drilled in the new Angelita field, San Patricio County, is being reworked. It was cored two feet deeper to 5380 feet, where it showed a well saturated sand with no indications of water. A drill stem test is to be run on the bottom two feet. If it shows no water, the well likely will be recompleted, otherwise, it probably will be drilled deeper.

The well was completed June 5 at 5360-78 feet, flowing at the rate of 115 barrels of oil and 125 barrels of salt water in a 12-hour period. On a ⅛-inch choke, it registered 1000 pounds tubing pressure and 1175 pounds casing pressure.

The well is in the east corner of the south half of Block 5, Villareal survey, 1500 feet west and a little north of the discovery well and only other test thus far drilled in the field.

Continental Oil Company and Atkins and O'Neil are moving in on a location 466 feet from the northeast and southeast line of Block 2, Villareal survey, south of the new producer and southeast of the discovery well. It is on E. H. Welder land, but the number has not been announced. It may be Welder 2 or 1-A. Nordan and Morris have been given the drilling contract.

Several miles to the south in Nueces County, Benedum and Trees have moved on J. O. Pickham 1, abandoned some time ago at 5004 feet. The hole has been cleared and it will be drilled to the Angelita producing level or deeper.

C. B. Bunte's C. C. Smith, three miles northeast of the Angelita discovery well and in San Patricio County, is coring at 5420 feet, apparently having missed the producing sand.

Eighteen Completions Made in South Texas

San Antonio, Texas.—A number of wildcats in scattered sections of the South Texas district were abandoned during the week. They are included in the following list of completions.

Company, Well and Location	Init. Prod. Bbls.	Depth
BASTROP COUNTY—		
Marts & Beaven, A. Reyes 8, A. Litton sur	15	1723
King 1, 850 ft swl & 1000 ft nwl of 236 ac tr, Enoch Harris sur No. 22	*	2230
BEXAR COUNTY—		
Dingman & Russell, Mrs. C. N. X. Cassin 3, F. Rodriguez sur, blk 4005	*	286
DUVAL COUNTY—		
A. C. Bess, A. Parr et ux 1, AB & M sur, sec 131, 990 ft el & 213 ft sl of sec	*	3580
Cox & Hamon, State 14, sec 60	2400	2237
Humble, Paul White 24, sec 249	¶10-25	2219
Magnolia, DCRC 27, sec 208	144	2325
Bishop-Duval 2, sec 59	480	2269
J. W. Riley 7, sec 45	600	2269
Reed & McKay, State 7, sec 60	1800	2231
EDWARDS COUNTY—		
Love & Evans, Steve Brown 1, 660 ft s of center nl, sec 66, blk 6, GWT & P sur	*	3002
LIVE OAK COUNTY—		
C. L. Witherspoon, Tom Draper 1, Sparks sur, se cor tr	*	1199
NUECES COUNTY—		
Southern Minerals Co., Anton Ocker 1, Saxet	420	4871
TRAVIS COUNTY—		
McNeil Pet. Co., Faulkner 1, Gates sur No. 63	*	800
WEBB COUNTY—		
Quintana Pet. Co., DCRC 2, 150 ft sl & 1643 ft wl of blk 11, sur 3, ZCSL sur	*	2178
WILLIAMSON COUNTY—		
G. L. Rowsey, Tr., Reiger 3-A, A. H. White sur	25	938
ZAPATA COUNTY—		
O. W. Killam, M. Guerra 32-A, Cerrito Blanco Gr., 1410 ft nwl & 4638 ft nel of 1772-ac tr.	*	2533
Texas Co., Whitehead 46, C. Blanco sur	60	1216

*Failures; †Junked; ¶Million cu. ft. gas.

Failure Defines Livingston Productive Area North Trend

Houston.—Between the Livingston field and the Sunshine area, J. Z. Werby's Whittforth 1, one mile north of the Livingston field, A. Viesca Survey, was abandoned last week after an electrical logging device tested salt water at 4580 feet. This important wildcat topped the Operculina at 4017 feet, Hockleyensis at 3286, or 151 feet higher than Howard 1. Top of the Cockfield was found around 4032 feet with an elevation of 239 feet. On a drill stem test from 4065 to 4076 feet the well showed 35 fourbles of salt water and one joint of mud with salt water through a half-inch choke on bottom in 18 minutes.

Failure of this well indicates that production will not be extended much further northward, the field in the past has proven very erratic and there has been difficulty in defining the field. Humble Oil & Refining Company abandoned that district some time in the past after failing on several of its tests.

The field through May, 1934, had 25 completed oil wells and two gas wells. There are 22 failures among the 49 wells drilled in the area. However since the first of the year a rapid development program has been in progress. In 1933 15 oil wells and one gas well were completed. During the year 28 wells were drilled in the field proper, 15 of which were oil wells and one gas well and 13 dry holes. Total production for the field in 1933 was 407,366 barrels of pipe line oil. Since the first of the year there were 19 completions, 10 oil wells and nine failures. Total production for this year is 210,600 barrels of oil, this making the total production for the field, 617,966 barrels of oil produced since discovery. The production is from the Conroe sand of the Cockfield age. Nearly all producing wells in the Livingston field have been completed at almost the same depth, indicating a thin producing zone and a flat structural condition. The structure is more uniform than that of the Conroe field. For example, one well was completed at 4315 feet, one at 4320, four at 4330, one at 4331, one at 4333, two at 4334, three at 4335, seven at 4337, and three at 4340 feet.

There is only one pipe line serving the field and that is Shell Petroleum Company's which line connects into the main East Texas-Houston line at Goodrich. Shell Petroleum Corporation, Humble Oil & Refining Company (who abandoned the district), Polk County Oil Company and Skelly Oil Company control the production of the field.

Water intrusion in the Livingston field now affects the majority of the producing wells, with cut oil ranging from 0.3 percent to as high as 59.5 percent. The field is producing approximately 1800 barrels per day under proration. It has lived up to early estimates that it would be small in size, and it is now considered to have a proven area of about 700 acres. Several of the wells are flowing, making from 0.3 percent to 8.2 percent water. Shell Petroleum Corporation's Davis Holmes 2, is making 46 barrels per day with 59.7 percent water.

Dick Schwab's Davis Holmes 1 was the discovery well for the field, and is located 2½ miles southeast of the Sunshine area and eight miles south of Livingston on the A. Viesca Survey. The well came in as a gas well making some distillate. The field is located in southern Polk County in the Augustine Viesca seven-league (31,996 acres) survey. In the northern portion of the survey is the area, about six miles south of Livingston, in which Sunshine Oil Company completed a small oil well, and which has been commonly referred to as the Sunshine area; while about three miles to the southeast of the original production district, in the southern portion of the Viesca Survey, is the area in which Dick Schwab completed a well yielding much gas and some high gravity oil, and in which another well, owned by Shell Petroleum Corporation, was brought in as a small producer.

The Livingston field was referred to for a long time as the Schwab area.

Production in the northern part of the big survey is from the Jackson age as compared to the Cockfield sand production in the more southerly area, it is planned tentatively to regard both as separate parts of the same field. Although the exact nature of the geologic structure is not yet known, it is thought that the two areas are producing from one big structure.

Eight miles southeast of the Livingston field, centering around the corners of the Peter Menard, P. Sublett, and G. S. Thomas Surveys, is the Ace area, a deep seated dome, which was discovered by torsion balance. Dick Schwab drilled Kirby-West 2, which was completed at 4856 feet. The well produced approximately 3,000,000 cubic feet of wet gas daily with occasional sprays of 42.6 gravity oil. Tubing pressure was 1250 pounds, casing pressure 650 pounds. Production was from the Cockfield. The operator's Kirby-West 1 was drilled prior to the completion of No. 2 but was abandoned after testing salt water at 4897 feet. The well encountered the same gas sand as found in No. 2 and the drillers experienced great difficulty in handling the well.

Alpha Petroleum Company's Kirby-West B-1, 4000 feet southeast of No. 1, which was a strong gas well, five miles

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southeast of the Livingston field and a southeast extension test on the G. S. Thomas Survey, was drilling late last week below 780 feet. The well is 3000 feet south of Dick Schwab's No. 2 gas well.

Gem Oil Company's Davis Holmes 5, A. Viesca Survey, was moving in material to spud shortly. The same operator's Davis Holmes 4 came in two weeks ago for 470 barrels per day through a quarter-inch choke from sands found from 4318 to 4330 feet.

W. H. Owenby's Duff 1, M. C. Swenney Survey, was coring sand with shows of oil. Sand was topped at 4303 feet and this formation was penetrated to 4350 feet. The operators are coring.

The southeast corner of A. Viesca, J. Wood, P. Carnal and C. W. Toliver Surveys are being worked with geophysical instruments by Harrison & Abercrombie. Humble Oil & Refining Company is working the Corrigan and Livingston areas with gravity meters. An Independent Exploration Company reflection crew has moved from Polk County over to Colorado County.

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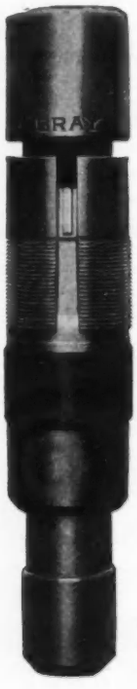

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Splendora Test Flows 47 Barrels in 12 Hours

Houston.—Steen Drilling Company's Texas Long Leaf Lumber Company 1, Walker County School Land Survey, eight miles east of the Conroe field, in the Splendora area of Montgomery County, made 47 barrels of 57.4 gravity distillate in 12 hours with a large volume of gas late last week. The distillate was changing to a dark tinted color during the 12-hour gauge. A three eighths-inch choke was used on the casing and a quarter-inch choke on the tubing. Tubing pressure was 2100 pounds. The producing sands are from 5816 to 5824 feet. Five-inch casing was set at 5841 feet and the wildcat was washed for 35 minutes and in eight minutes it showed a pressure of 2100 pounds with a large volume of gas. Two joints of screen were set and the tubing was hung four feet off bottom.

Gas and distillate showing in this wildcat marks it as the eighth wildcat located on the Conroe trend to show gas and oil of indicated commercial quantities. This wildcat encountered the top of the Cockfield in the old hole at 5821 feet, and penetrated that formation 56 feet and on March 12, showed 350 pounds gas pressure, two gallons of distillate and four gallons of mud in four minutes on a drill stem test from 5855 to 5877 feet.

The operators plugged back and drilled in a new hole and, topping the Cockfield at 5749 feet or 72 feet higher than the old hole. Gas sands were shown from 5817 to 5827 feet. On a drill stem test from 5827 to 5842 feet the well showed two gallons of distillate through a quarter-inch choke in 10 minutes. From 5957 to 5963 feet a sand was cored with a salty taste with no shows of oil. From 5979 to 5983 feet several drill stem tests were attempted but the seat failed to hold and the operators were unsuccessful. From 6013 to 6021 feet a sand was found, and from 6007 to 6021 feet the well showed 32 fourbles of salt water. The hole was bottomed at 6041 and was plugged back to 5840 feet where the five-inch casing was set and the well was completed. The operators have a storage tank and a separator installed near the well. The elevation of this important test is 113 feet.

Approximately 8000 feet north of the Steen well, Humble Oil & Refining Company was coring ahead 82 feet below the top of the Cockfield, that formation having been topped at 5646 feet. On a drill stem test from 5857 to 5865 feet the well showed 23 fourbles of mud, but the tool slipped and the company wasn't able to get a true test and another test was attempted from 5865 to 5868 but this one failed also and at the close of the week the company was making another drill stem test.

Amerada & Stanolind's Manor 1, near the Harris County line, was coring ahead below 6613 feet late last week. The operators topped the Operculina at 6318 feet, Camerina from 6320 to 6327 feet, Cockfield at 6338 feet. Elevation is 187 feet. Cores showed from 6583 to 6584 feet odor of gas, 6595 to 6601 feet odor and taste of gas and distillate, down to 6611 feet a good distillate taste with a little salty taste, to 6613 feet a good odor of gas with a salty taste. The operators have 40 feet of sand and are drilling approximately 275 feet below the top of the Cockfield.

Over in Jasper County, Alpha Petroleum Company's (was Louis Franklin) Cartwright 1, northeast of the Spurger area and across the county line in Jasper County, was coring ahead at 4457 feet after having topped the Cockfield at 4436 feet with an elevation of 68 feet. Vicksburg was encountered at 3138 feet, Hockleyensis at 3767 feet, Massilina Pratti 3688, Warreni 3399 feet. Top of the sand was found at 4457 feet and it is reported that there were no shows. The well is running about 40 feet higher than the Republic well in the Spurger area.

Start Well At Addicks; Sour Lake Test Redrilling

Houston.—In the Joel Wheaten Survey of Harris County on the S. W. Gassoway 354-acre tract, 18 miles southwest of Houston, near Addicks, Louis Franklin is going to drill a well to the Cockfield horizon.

About a year ago, two Fort Worth,

Texas, operators acquired about 2400 acres in this vicinity for Stanolind Oil & Gas Company and now Louis Franklin has completed a deal with the latter, whereby Stanolind keeps 1000 acres and Louis Franklin agrees to begin a well by June 23, the location will be near the center of the S. W. Gassoway tract.

Other parties who have acquired acreage from Louis Franklin are, United Gas Company, Fohs Oil Company, Alpha Petroleum Company, Magnolia Petroleum Company. Acreage is now selling for a base of $50. The well will be on a torsion balance picture worked out several years ago. The contract depth of the wildcat is 7500 feet or to the Cockfield.

It is reported that another well will be drilled near Houston within the next two weeks. Loring Oil Company of Pittsburgh has staked a location between Westheimer Road and Bissonnet Avenue, in Bellaire. The wildcat will be drilled to 6000 feet by L. W. Capps. It will be on the Westmoreland Development Company property, in the Swisher Survey. The operators have approximately 6000 acres blocked in this area.

Pharr et al's Bernard 1, on the east flank of the Sour Lake field, a new deep Cockfield well was plugged back and the hole will be sidetracked and redrilled to the sands found at 6952 feet. The operators failed to bring this well in after pumping mud into the hole to keep it from blowing out. During recent weeks they have swabbed little oil. Alpha Petroleum Company's Weiss 1, 2½ miles northwest of Kountz and 150 feet west of the Pharr well, was drilling below 950 feet at the end of the week. This well was taken over from the Steinberger Petroleum Corporation by Alpha Petroleum Company, and in return Alpha is going to drill two free wells for half interest in the five-acre lease if the well is a producer. Humble Oil & Refining Company has made location in the Sour Lake field, S. Jackson Survey, south of Minor Oil Company's tract, and is reported that the company will spud soon.

Slick Field Registers Another Failure

San Anotnio, Texas.—The Slick field, DeWitt-Goliad County line, apparently will provide only one oil producer, that being the discovery drilled several years ago. Slick-Urschel's Poetter 4, fourth well on this tract and ninth to be drilled in the field, is down 4215 feet and has not encountered the sand. Thus far, the discovery well is the only oil producer. Two gas wells have been drilled, and the rest have been failures. The well is 3170 feet from the southeast line and 990 feet southeast of No. 3 in the O. Marshall survey.

Cleveland Field Test Drilling In New Hole

Houston.—In the new Cleveland field of Liberty County, Gulf Production Company's Kirby C-2, was plugged back to 5600 feet and then whipstocked at 5650 feet. The company is now drilling at 5720 feet. It is reported that the sands will be tested around 5885 feet, where the well showed 700 feet of salt water and 200 feet of cut oil a month ago. The original hole was carried to 8735 feet where a core barrel was lost. This well, at the time, was the deepest wildcat on the Texas Gulf Coast Conroe trend. The company topped the Ceratobulimina eximia from 7024 to 7027 feet, a section of the Cook Mountain, and from that formation on down the operators expected to pick up the Sparta and the Weches but there were no characteristic "bugs." The bottom 1500 or 1800 feet was nothing but a brown shale and there was no formation topped or no formation determined after the Cook Mountain. The Uvigerina was found from 4600 to 4604 feet, Massilina Pratti from 4701 to 4704 feet, Textularia Hockleyensis from 4650 to 4754 feet, Textularia Dibollensis 5568 to 5571 feet, Camerina 5635 to 5638 feet

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Sinclair Oil Co., Wilburn A-17	693	4199
CONROE—		
Gulf Coast Drlg. Co., Keystone Mills 23	450	5101
Humble O&R Co., Keystone Mills 24	2080	5127
Keystone Mills 29	2208	5124
Strake Pet. Corp., E. Etheridge 6	*	....
Keystone Mills 4	1128	* ....
Krohn B-6	*	....
Krohn B-7	*	....
Sun Oil Co., Foster 32	*	....
GOOSE CREEK—		
Miramar Corp., Hughes 2	500	4551
HULL—		
Sun Oil Co., Carr Fee 6-A	1248	4826
TOMBALL—		
Humble O&R Co., Bloecher 3	436	5579
Schultz B-1	288	5606
The Texas Co., Sherer 2	¶5	5575
POLK COUNTY—		
J. Z. Werby, Whittforth 1, mi n of Livingston field, A. Viesca sur.	*	4580

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The Texas Co., School Board Bay St. Elaine 4	*	3863
IOWA—		
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Gulf Refining Co., Bernard 4	780	3730
The Texas Co., L. L. E. Leesville 18	1000	3718
SULPHUR—		
Union Sulphur Co., Fee 790	*	6151
Fee 791	*	3453
WHITE CASTLE—		
Shell Pet. Corp., Wilbert 8	*	4573

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Keystone Mills 29	2208	5124
Strake Pet. Corp., E. Etheridge 6	*	....
Keystone Mills 4	1128	* ....
Krohn B-6	*	....
Krohn B-7	*	....
Sun Oil Co., Foster 32	*	....
GOOSE CREEK—		
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Fee 791	*	3453
WHITE CASTLE—		
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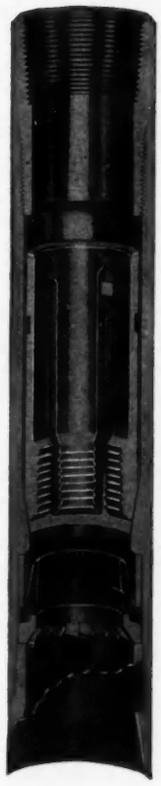

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Important Wildcats Started in Louisiana

Shreveport, La.—L. M. Moffitt et al (Rocky Mountain Syndicate) last week made location for the first test on an 18,000-acre block assembled recently in Bossier Parish, Louisiana, having derrick up and are moving in rig for C. A. Antrim 1, 330 feet north and west SEc SW NE Section 26-22n-12w. The test will go to 3200 feet. Ohio Oil Company and Magnolia Petroleum Company each has taken a one-third interest in this block.

The test to be drilled on a 9000-acre block assembled recently in Natchitoches Parish by Wilkins and Abraham and on which location was made for Brown Lumber Company 1, 400 feet south and 300 feet east NWc NE SW Section 27-9n-9w, will be hereafter carried in the name of Jack Lent as operator. Materials are on the ground.

As the result of the recent completion of a Nacatosh sand gasser in the Blanchard gas field, Caddo Parish, three new locations were announced last week in that area as follows: Nick Babare's T. C. Lindsay 1, 660 feet north and west SEc SW Section 34-19n-16w, rigging up; Producers-Pyramid Oil & Gas Company's John Bayliss 1, 1320 feet north and 600 feet west SEc Section 3-18-16, derrick; and Howard Hammock 1, 660 feet north and east SWc Section 3-18-16.

Two new locations were announced for the Converse field, Sabine Parish, as follows: Florence Oil Company's McDonald 1, 330 feet south and east center Section 16-9n-13w, derrick; and Lawson, Leavell & Bryant's Bank of Pleasant Hill 1, 330 feet north and east SWc NW NE Section 29-9n-13w, which is rigging up.

Two new locations were announced for the Zwolle field, Sabine Parish, as follows: Service Drilling & Royalty Company's R. A. Brown 1, 530 feet north and 460 feet west SEc NE SE Section 7-7n-10w, which has spudded and set surface casing; and Monroe Production Company's Sabine Lumber Company 6, 330 feet north and east SWc SE NE Section 12-7n-12w, a derrick.

G. H. Collins of Houston, Texas, has assigned to the Pearl Oil Corporation of which Byron A. Irwin, Shreveport, is president, leases on the south half of the southeast quarter Section 20-9n-13w, and on the north half of northwest quarter of southwest quarter Section 21-9n-13w, with three producing wells on the first lease for 298 shares of stock in this company at par value of $100 per share. The acreage is in the Converse field, Sabine Parish.

In the west side of the old Elm Grove gas field, Bossier Parish, United Gas Public Service Company has taken 1025 acres of leases for a consideration of $4000, according to records filed at Benton, Parish seat of Bossier Parish.

Large Louisiana Block Is Being Assembled

Shreveport, La.—M. H. Marr et al of Dallas, Texas, have taken a geophysical option on 55,000 acres of land, owned mostly in fee by Davis Brothers Lumber Company, situated mainly in township 17 north, range 4 west, Bienville Parish, but extending into Jackson and Lincoln Parishes in the Louisiana Basin, and have a crew already at work on the block. Two contour maps will be made of the block, one on the Annona chalk and the other on the anhydrite.

Leasing Continues in Louisiana Trend Play

Alexandria, La.—With approximately two and one-half million acres "in the trend" already under lease, it is expected that within the next few months approximately one million more acres will be leased. A great deal of the land "in the trend" in Central Louisiana and South Mississippi is owned by large lumber companies, which facilitates leasing in large blocks. Potential future supplies of oil that might be found would also be near tidewater. Much of the land leased from lumber companies is cut-over land and owners are glad to get rental money to pay taxes with.

Deep Commercial Gasser Completed in Louisiana

Shreveport, La.—Three small gassers and three small oil producers were among North Louisiana's 11 completions last week. The oil wells were divided between Converse which had one small pumper and Zwolle, which had two pumpers, the larger good for 150 barrels daily being completed after use of chemicals in the chalk, and the other good for 100 barrels of oil but which is making about 15 barrels of salt water along with the oil.

R. W. Norton's J. B. French B-1, NW NW Section 34-23n-16w, in the Rodessa gas field of northwest Caddo Parish, drilled to 6717 feet in search of oil under the oolitic lime zone of the Glen Rose that produces a highly saturated gasoline at the 5600-5700 foot level, was plugged back and completed as a gasser gauging 1,960,000 cubic feet daily with 2150 pounds rock pressure at 5870 feet, the deepest commercial well ever completed in North Louisiana. It is producing from the oolitic lime.

A test in the Nacatosh of the old Dixie field of Caddo Parish that showed oil and gas at 883 feet, was abandoned last week as a dry hole at that depth.

Completions last week in North Louisiana follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (Rodessa)—		
R. W. Norton, J. B. French B-1, nw nw 34-23n-16w	¶2	5870
CADDO PARISH (Dixie)—		
Kerley-Litton Oil Corp., Sibley 1, ne sw 15-19n-14w	*	883
DESOTO PARISH—		
J. D. Winters, H. Smith 1, se se 31-14n-15w	*	2470
SABINE PARISH (Converse)—		
W. F. Lacey, Logan Oil Co. 1, sw nw 2-9n-13w	*	2006
Parker et al, E. & P. Henderson 1, se ne 29-9n-13w	10	1920
SABINE PARISH (Zwolle)—		
Magnolia Pet. Co., Ruth Gindratt 2, se nw 30-8n-11w	*	2485
Texas Company, E. N. Stille 7, nw sw 33-8n-11w	*	2625
Service Drilling & Royalty Co., E. E. Smith 6, nw se 7-7n-10w	150	2652
Monroe Production Co., Sabine Lbr. Co. 5, se ne 12-7n-12w	100	2468
OUACHITA PARISH (Monroe)—		
Ark. La. Pipe Line Co., Rea & Green 8, se nw 3-18n-4e	¶1¼	2190
UNION PARISH (Monroe)—		
Southern Carbon Co., L. R. Jinny 2, se sw 9-20n-4e	¶16¼	2140

*Failures; †Junked; ¶Million cu. ft. gas.

Arkansas Completes But Three Tests

El Dorado, Arkansas.—The first attempt to obtain production by treatment of a horizon with acid in the state of Arkansas ended in failure last week when E. R. Henderson's J. H. Ogden 1, located 330 feet south and 310 feet east NWc SW SE Section 32-18-14, Union County, a wildcat test, was abandoned as a dry hole at 2208 feet in the Nacatosh formation. This well had shown oil before being treated with chemicals and a good show resulted from the treatment but not in commercial quantity.

Completions last week in Arkansas follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
LA FAYETTE COUNTY—		
George W. Harper, Reed-Bodcau 2, sw nw 16-15-22	*	1216
MILLER COUNTY (Garland City)—		
Duluth-Arkansas Oil Co., Beck 2, se sw 34-15-26	10	2811
UNION COUNTY—		
E. R. Henderson, J. H. Ogden 1, sw se 32-18-14	*	2208

*Failures; †Junked; ¶Million cu. ft. gas.

Miller County Wildcat Holds Arkansas Interest

Texarkana, Ark.—Chief interest in oil activity in Arkansas last week centered in E. L. Young et al's R. M. Patterson 1, SE NE Section 5-19-28, Miller County, in which a string of 6⅝-inch casing was set last week at 3635 feet. Revised total depth of this

test is now given as 3655 feet, it originally having been reported as 3667 feet. Elevation is 405 feet.

A sand core said to have shown oil was recovered from this test several weeks ago and was identified as of Woodbine age. A great deal of title work had to be done on the 6800-acre block and John Pugh of Shreveport later acquired controlling interest in the test. No formation tester was run before the casing was cemented.

The reported oil showing in this well started a considerable leasing and drilling campaign in Miller and La Fayette counties. Much of the leasing was in a play for a fault running northeast-southwest from the vicinity of this test.

Two new locations were announced last week in Arkansas, one in Calhoun County and the other in the Garland City field, Miller County. The former test in a wildcat area is Mid-American Oil Corporation's J. H. Plunkett 1, 660 feet south and 440 feet east NWc NW SW Section 15-14-15, which has spudded and shut down at 50 feet to do title work. The lattter is Magnolia Petroleum Company's Olivet 3, 250 feet south and 160 feet east NWc NE NE Section 4-16-26, Miller County.

Two New Locations Made in Mississippi

Jackson, Miss.—Two new locations were announced last week in Mississippi, one for the northeast part of the Jackson gas field in Rankin County, and the other a wildcat in Washington County, delta section.

The former test is Love Petroleum Company's Fee 3, Section 1-5n-1e, which is rigging. The Washington County wildcat is Perkins & Dee's Lee 1, located 1500 feet east and 500 feet north SWc Section 33-15n-8w, which has spudded and is drilling below 75 feet. Assembly of this block was reported several weeks ago.

What the significance is, if any, to Gulf Refining Company's setting of seven-inch casing at 3800 feet in May L. Williams 1, SE NE Section 35-5s-17w, Pearl River County, Mississippi, "in the trend" last week is not known. The well is drilling "tight". Total depth is 3920 feet. It is remarked that of more than a dozen tests drilled in south Mississippi, this is the first to set a string of casing.

Reports are current here that Charles Green et al's contemplated test on a 12,000-acre block in Clarke County, east central Mississippi, will go to 5000 feet and that contract has been let to Joe Modisette of El Dorado, Arkansas.

Magnolia Commences Alabama Wildcat Test

Mobile, Ala.—Magnolia Petroleum Company last week made its first location on a 65,000-acre block it has held for some time in Clarke County, Alabama. The test, which will go to 4000 feet, is Scotch Lumber Company 1, located 250 feet north and 310 feet east NEc Section 17-10n-3e, near the town of Thomasville. Joe Modisette of El Dorado, Araknsas, has been given contract to drill and he will probably use the heavy rig he used to drill a wildcat in Covington County, Mississippi, last year for Eastman Gardiner et al of Laurel, Mississippi. This test went to 8002 feet and set a depth record for the southeastern states. The location was made on the Tallahatta formation of lower Claiborne; elevation on the ground is 354 feet.

Jackson, Miss.—Mississippi Oil & Refining Company's 250-barrel capacity refinery built some months ago in East Jackson after three wells showed considerable heavy oil of about 13.2 gravity, was sold recently in a foreclosure sale to J. Tom Allen et al of Jackson for $750.

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California Operators After Building Reserves for Future

Los Angeles.—Although California is one of the leading oil producing states in the Union, operators are becoming slightly worried that no new fields have been found in recent years. The last field worthy of mention to be proved was Mountain View in Kern County near Bakersfield, but the new field is erratic, and its ultimate value is still to a large extent an unknown quantity. It now appears it will be of considerable length, but probably will be confined to a limited width.

In the meantime, the more important companies in California are seeking new producing areas and each month tying up and making plans to test out unproven districts. The major companies realize that new fields are necessary. They realize that new and deeper sands in the older fields will help out, but new fields are needed to take care of future demands.

Hence a wildcat campaign is now gaining headway in the state, and will graw as time goes by.

Union Oil Company which 10 years ago had what was then termed ample reserves, is now wildcatting in three areas, with other districts under consideration.

General Petroleum Corporation is now drilling the deepest well in the world in the old Belridge field in Kern County in the hopes of developing production below 11,000 feet, and is also now making plans to start a new wildcat at Bakersfield.

Standard Oil Company, regardless of its proven acreage at Kettleman Hills, Coyote, Huntington Beach and other fields, is trying for new production in several wildcat sections of the state, and it is understood is willing to consider likely unproven acreage.

Union Oil Company has taken over the drilling to completion of Kettleman Oil & Gas Association's Lillis-Welch 1, northwest of the proven Kettleman North Dome field. This well had reached 10,994 feet when the drill pipe was twisted off. Part of it was recovered and the rest was sidetracked.

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Ten California Completions Produce

Los Angeles.—California furnished 10 new oil wells the past week, but the total flush production was only 4670 barrels. Long Beach led off with three completions averaging close to 300 barrels each, in addition to two recompletions good for a combined flush of 360 barrels. The list of new completions follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
LONG BEACH—		
Mines Oil Co., No. 1	300	4850
Plymouth Pet. Co., No. 11	400	7426
Union Oil Co., L.B.C. 23	190	3856
HUNTINGTON BEACH—		
Millroy Oil Co., No. 1	150	4985
Standard Oil Co., H.B. 65	600	4405
MONTEBELLO—		
Standard Oil Co., Temple 20	285	3703
WEST COYOTE—		
Standard Oil Co., Murphy-Coyote 117	400	5550
MT. POSO—		
The Texas Co., Alta Vedder 5	585	1838
ROUND MOUNTAIN—		
Rex Oil Co., No. 2	200	1617
KETTLEMAN HILLS—		
Kettleman North Dome Assn., No. 32-28J	2100	8000

*Failures; †Junked; ¶Million cu. ft. gas.

Total depth of the new hole is close to 10,000 feet.

Associated Oil Company is also doing some wildcatting, and is active working over old wells, drilling them deeper, and otherwise taking steps to increase its future production in addition to adding to its reserves.

Most of the new and increased activity at present is being centered largely in Kern County, southeast, east and northeast of Bakersfield. Hotels at Bakersfield are catering to near capacity business, with other cities such as Taft, Coalinga, etc., feeling the benefit of the renewed drilling activity. In years past, while the high gravity fields of Southern California were being developed, the north part of the state was neglected, due to the heavy oil produced and its lack of a market. Deeper drilling is now furnishing a better grade of oil and the crude in certain fields is also increasing in value due to its lube stock content.

One Mountain View Well Flows; Two Refuse

Los Angeles.—Mohawk Oil Company's Clendenen 3 was completed at Mountain View June 3 for 1250 barrels of 29 gravity oil at 5780 feet. It is in Section 30-30-29 and string of 8⅝-inch was cemented at 5430 feet, which indicates the amount of sand taken in.

Hogan Petroleum Company's Midstate 1, Section 29-30-29, in the same field, failed to flow with bottom at 5845 feet and after cementing 8⅝-inch at 5745 feet. It is being swabbed. Hubro Oil Corporation's Noble-Petrol 1A, Section 30-30-29, was plugged from 5880 feet to 5850 feet and was washed with oil, but failed to flow. The swab is being tried.

Standard Oil Company's Nichols Community 1, Section 19-30-29, was plugged back to 5557 feet from 5843 feet, but refused to flow. Cable tools are being rigged to clean out to bottom.

On May 31, Mountain View produced 4946 barrels of oil against an allowable of 2210 barrels, based on an estimated potential of 9165 barrels. For June, the field is given an increase in both potential and allowable.

Los Angeles.—Fire started in the old part of the Huntington Beach field June 2 by an explosion destroyed six derricks over pumpers making a total daily output of 130 barrels and greatly damaged the O. C. Fields gasoline plant. Fumes from a broken gasoline hose at the plant became ignited and the flames for a time threatened much of that part of the old field. The amount of oil burned was small. Total loss was estimated at about $100,000.

Second Lea County Well Starts Drill Campaign

Hobbs, New Mexico.—Completion of a second prolific oil well in the recently discovered pool near Cooper, Lea County, and on a line between the Jal and Eunice fields through the deepening of an old completed gasser is to touch off a sizeable drilling campaign for the area. Four tests are being started in the field, while a number of other locations are in the making.

General Crude Oil Company and Magnolia Petroleum Company, discoverers of oil in the Cooper pool, were successful in deepening their Zattu Cushing 1, SWc SE NW Section 23-24s-36e, from 3205 feet to saturated lime formation at 3489-3498 feet. It gauged 25 barrels of 30 gravity oil during the first hour and 17 barrels on the second hour, flowing through ¾-inch choke on 2½-inch tubing, with 300 pounds tubing pressure and 800 pounds casing pressure. The flow was restricted to 10 barrels per hour by changing to ⅜-inch choke on the third hour, and the daily gas yield was cut from about 8,000,000 to 2,500,000 cubic feet. The tubing pressure increased to 800 pounds, and the casing pressure to 1100 pounds when the well was produced through the smaller choke. The owners have announced that a packer will be installed on the tubing to shut off a portion of the gas output.

Originally Gasser

This new well was originally completed in November, 1929, rated at 40,000,000 cubic feet of dry gas daily at 3205 feet. It has an elevation of 3339 feet, and topped the lime marker at 2795 feet. It is about a half-mile east by north of the same companies' A. E. Meyer 1, NEc SE Section 22-24s-36e, which opened the Cooper field April 21 rated at 5000 barrels of pipe line oil daily from lime at 3501-3508 feet, with an elevation of 3337 feet. Meyer 1 is allowed to produce 225 barrels daily under proration. It is four miles north of nearest production in the North Jal field.

Phillips Petroleum Company, purchaser of controlling interest in all leases held by Pure Oil Company in the Cooper area, is rigging up to drill an east offset to the discovery well, and is also starting an offset to the latest producer. Stanolind Oil & Gas Company's A. E. Meyer 1, a north offset to the discovery well, has been spudded. The Texas Company is starting a test about midway between the Cooper and North Jal areas, having made location for I. B. Ogg 1, C SW NE Section 35-24s-36e. It is on a Federal permit.

Completions in New Mexico and the Mountain area reported during the week follow:

NEW MEXICO

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Cooper Field)—		
Gen'l Crude Oil Co.-Magnolia, Z. Cushing 1, swc se nw 23-24s-36e	¶8-3500	3498
SAN JUAN COUNTY—		
Bashaw et al, Stallings 1, sw nw nw 1-29s-16w	*	760

MONTANA

GLACIER COUNTY—		
Nyhagen & Bell, Anderson 2, nw nw sw 23-35n-6w	50	2950
TOOLE COUNTY—		
Big West Oil Co., Sorrell 1, cnw se 7-34n-3w	¶2	1486
C. T. Oien, Schumaker 1, ne sw sw 2-34n-2w	*	1376

*Failures; †Junked; ¶Million cu. ft. gas.

Stanolind Proposes Iles Pipe Line Outlet

Denver, Colo.—Because of high freight rates from Craig, Colorado, to Salt Lake City, Utah, Stanolind Oil & Gas Company is considering plans for a pipe line from the Iles oil pool in Moffatt County, Northwestern Colorado, to Rifle, Colorado, a point on the Denver & Midland Colorado Railroad. This would give a direct railroad line from the pipe line terminus to Salt Lake, and it is believed that it would effect a considerable saving in freight tariffs.

While the plans are still in the formative stage, it is definitely known that they have progressed to the point where officials of the company's pipe line department have gone over the route of the proposed line and made estimates as to its cost. G. M. Vandaveer of Casper, head of the pipe line department, has made several trips over the proposed route.

Present plans provide for a four-inch line, 61 miles long. The estimated cost of the line is approximately $200,000. It will require an initial pump station in the field and a booster station at Meeker. It is believed that the line would handle from 4000 to 5000 barrels daily under a pressure of from 400 to 500 pounds.

Some very good wells have been completed in the Iles pool recently by The Texas Company and Stanolind Oil & Gas Company. The latest completion by Stanolind Oil & Gas Company came in for 5000 barrels daily. The Texas Company handles the Iles crude at its plant in Craig, while the Stanolind has been shipping to the Utah Oil Refining Company at Salt Lake.

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Minerals Title Halts Cut Bank Town-Lot Work

Cut Bank, Mont.—Visions of town lot drilling in the town of Cut Bank will probably end in visions. Recent completions in the areas north and southeast of the town indicate that the town itself is underlaid with oil, at least it is on the trend.

An examination of the records by some of the major oil companies disclosed that the north half of the section on which the town is located, Section 12-33-6w, was originally owned by the state and that in selling the lots it reserved the mineral rights with the possible exception of a few of the first lots sold. As the state possibly would not be a party to unnecessary drilling, there is small chance of a town lot drilling campaign. The south half of the section in which the town is located is leased to Santa Rita Oil & Gas Company.

There were two completions in the Cut Bank field in the last week and three new locations. There are now 39 tests under way in the district.

The Texas Company completed H. H. Antrim 2, Section 34-35n-6w, for 75 barrels at 2901 feet. Nyhagen-Bell completed Anderson 2, NW NW SW Section 26-35-6w, at 2950 feet. It swabbed 100 barrels the first 24 hours and 50 barrels the second 24 hours.

The new locations were as follows: Montana Power Company's Fuller 1, SW Section 17-33n-5w, building rig; The Texas Company's Consolidated Gas Company 1, Section 15-35n-5w, rig on locations; H. H. Antrim 3, Section 34-45n-6w.

Rock Springs, Wyo.—Mountain Fuel Supply Company reports completion of two gas wells in the Rock Springs area this week. Its Florence Wilson 3-B, center SE SE Section 15-12n-100w, was completed for 15,000,000 cubic feet of gas from the Wasatch formation at 2892 feet. This test is on Hiawatha Dome, 40 miles south of here.

Craig, Colo.—Stanolind Oil & Gas Company's Parkinson 6, NW Section 23-98w, is going on the pump. Hole is boting at 1351 feet. In the Frannie field, Park County, Wyoming, the company's Rosenburg 1, SW NE Section 26-58n-98w, is going on the pump. Hole is tomed at 3297 feet and the well is estimated at 400 barrels.

★

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Cut Bank Line Outlets Planned by Two Concerns

Cut Bank, Mont.—Because of its high value for refinery purposes, there is a scramble on among the refineries and purchasers of crude oil for Cut Bank production. As a result of the keen demand for this crude, there is a possibility that the field may soon have two major pipe line outlets.

It is stated that The Texas Company has already received bids for lines from the field to its refinery at Sunburst, and that Toronto Pipe Line Company, a subsidiary of the Imperial Oil, Ltd.. is making a survey of the field. Fred Platt and J. Cadby of Shelby are making a survey for the Canadian company.

In the case of The Texas Company, it is expected that work on the line will start immediately. This company already has a short line from the field to railhead to Cut Bank, which it purchased from Santa Rita Oil & Gas Company. The Texas Company line will probably consist of six-inch pipe and be around 30 miles in length. It will run from the field to Sunburst and may be extended across the Canadian border. The approximate cost of the line to Sunburst is estimated at $200,000.

Toronto Pipe Line Company's line would probably be laid from the field to the refinery of the Imperial Oil, Ltd., at Coutts, Alberta. From there it will probably be extended northward to the company's refinery at Moosejaw and Calgary. All of these refineries process large quantities of American crude.

Two Completions in Wyoming Fields

Casper, Wyo.—Operations in proven fields in Wyoming in the last week resulted in one completion. In the Osage field Chadron-Osage Oil Company completed No. 25, SW SE Section 14-46-64, at 2915 feet for an initial production of 50 barrels daily.

On Midway Dome, 12 miles north of Casper, the Mutual Oil Syndicate (Sidney H. Keoughan et al) drilled Boyer 2, NE Sec. 23-35n-79w, deeper from 5190 feet to 5205 feet and increased the production from 120 barrels daily to 280 barrels. It is stated that the company will drill two more tests on the structure before the close of the year.

Bridger, Mont.—The Ohio Oil Company is drilling one well in the Dry Creek field, Carbon County, Southern Montana. The new test is Agnes Maddox 14, and it is located in the NW NW Section 10-7s-21e. The 10-inch casing has been cemented at 887 feet.

Casper, Wyo.—Paul Stock of Billings, Montana, has released a location for a new well in the Oregon Basin field in Park County, Northern Wyoming. The well is on a Federal permit in SE SE NE Section 29-51n-100w. Drilling is to begin immediately. Stock is at the head of Big Horn Oil & Refining Company of Billings. The various companies in the Oregon Basin field are putting their wells on production again, most of the crude moving to the refineries at Billings and Laurel.

Mecosta-Montcalm Play Holds Michigan Interest

Mt. Pleasant, Mich.—Testing of the Mecosta-Montcalm Counties structure was under way this week on eight scattered wildcats either drilling, moving in or rigging up. Six other tentative locations were reported.

Mid-summer is expected to see the bulk of wildcat activity in Michigan testing the Mecosta-Montcalm play, where gas in commercial quantities in the Michigan Stray sand and oil in the Traverse lime horizon has been developed.

Development in the area has brought contractors a new problem due to drift deposits that run from 500 to 750 feet and strata of shell and gumbo above the Michigan Stray and Marshall formations. The best time to date in drilling to the Marshall casing point was recorded on Pure Oil Company's Hansen 1, Home township, drilled by Lupher Drilling Company with rotary tools.

McClanahan Oil Company's Frackelton 1, Clare County, Lincoln township, Section 18, will skid to new location after parting casing and failing to recover. The test was down 1420 feet and ready to case for a test of the Michigan Stray gas sand.

Jasmid Oil Corporation's Pietscher 1, Midland County, Jasper township, Section 28, wildcat test, six miles west of production in Porter, will case at 3300 feet above the Dundee top to case off Traverse water and drill ahead for a test of the lime formation the last of the week.

St. Joe County Wildcat Test Resumes Drilling

Mt. Pleasant, Mich.—Tucked away in a heavily wooded area in a southern outpost district of Michigan, drilling operations were resumed last week on the long-idle Lillian Mankhe 1, wildcat in St. Joe County, Lockport township, Section 2.

Little information was given out on the rig floor. Carl Goff, drilling contractor and part owner, consented, however, to showing that when the hole was bailed that gas burned about a foot high. What formation the gas came from was not revealed.

Goff said he was drilling in the Salina or Niagara formation and that he planned eventually to drill into the Trenton, around 2200-2500 feet. It was estimated that the hole was down between 1500-1700 feet and probably 20 feet of hole had been drilled since operations were resumed. The hole carries about 1200-1500 feet of water.

Little information ever has been put out on the test, which was started two years ago. Drilling was carried on until last spring at off and on intervals when most scouts dropped it as abandoned.

The state conservation department listed it in the 1933 manual as down to 1025 feet; Red Rock 445 feet and Traverse top at 940 feet. Goff said the Dundee was around 1100 feet.

Little testing has ever been done in St. Joe County. Several years ago two or three shallow wells were sunk and showed gas signs.

Michigan Production Reaches New Peak

Mt. Pleasant, Mich.—Although Michigan's daily potential production fell 4100 barrels from May 1 to June 1, completion of 25 more producers in May resulted in dropping of the prorate percentage from seven to five percent.

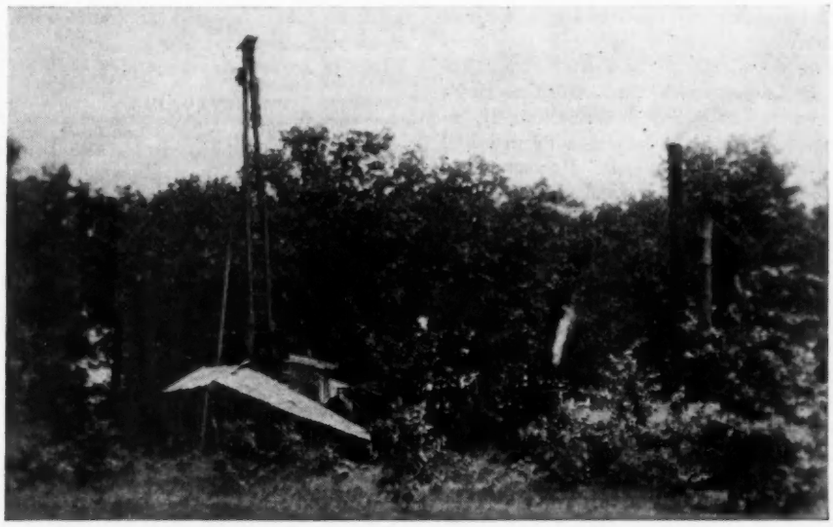
The state's potential production as of June 1, announced by Michigan Proration Committee, was 131,801 barrels from a total of 920 wells. As of May 1 the potential was 135,910 barrels daily from 895 wells.

The flush Porter pool in Midland County, which stands the brunt of Michigan proration, declined in the month from a potential of 122,380 barrels to 118,294 barrels. Wells producing under 100 barrels daily are exempt and with 192 wells now on production in the Porter pool it is rapidly approaching the point where exempt oil will account for all its allowable runs. This may result in further reducing of the prorate.

Total production in Michigan for May was 985,624 barrels, the highest monthly production ever reached in Michigan. It brought the year total to 4,273,918 barrels as compared to 12 months production of 7,941,995 barrels in the peak year of 1933.

	Wells	Potentials	Runs
Porter	192	118,294	21,371
Yost	12	2,486	858
Greendale-Chippewa	316	4,177	4,177
Vernon	47	2,645	2,645
Leaton	25	693	693
Montcalm	2	2,251	349
Ogemaw	13	502	292
Saginaw	130	113	113
Oceana	14	157	90
Muskegon	168	480	480
Cass	1	3	3
State total	920	131,801	31,071

Basin, Wyo.—Yale Oil Corporation is rigging up for a test on Federal permit in NE NW Section 28-49n-91w, seven miles east of Manderson, in Big Horn County. The location is a quarter-mile south of where C. W. Markham drilled a well several years ago, which produced 10 barrels daily of light oil. Yale Oil Corporation has refineries at Miles City, Billings and Worland, Wyoming. It is active in marketing gasoline and refinery products throughout Montana, Northern Wyoming and the Dakotas.



Drilling resumed on Lillian E. Mankhe's Mankhe 1 wildcat, St. Joe County, Lockport township, Section 2. It shows some gas when bailed and carries about 1200 feet of water in an uncased eight-inch hole. Drilling was resumed last week after being shut down since 1933.

Acid Treatment Is a Michigan Proration Problem

Mt. Pleasant, Mich.—Due to the high percentage of acid treating of oil wells in the Michigan fields, a problem is faced by the Michigan Proration Committee perhaps unique to this state alone in the oil areas.

Michigan's potential production was 131,801 barrels daily as of June 1 while the state allocation is 31,800 barrels daily. The committee has attempted to control acid treating of wells in face of the proration problem to only "necessary wells." For the past several months the committee has required operators to file a written request to treat and the policy has been to permit treating of only the lighter wells. However, operators have been permitted to treat wells offsetting treated wells and in some cases treating of one well has brought treatment on as many as 12 others offsetting. In some instances wells having initial production of 200 and more barrels have been treated and in most cases this has resulted in increases in production and increased the proration problem.

The present policy of the committee is to allow only direct offsets to treated wells to be treated, except wells having less than 100 barrels natural production. The committee also has recommended to operators that even direct offsets to treated wells should not be treated if the production of the untreated well already equals the production of the treated well.

Michigan Records Sixteen Completions

Mt. Pleasant, Mich—Sixteen completions in Michigan for the week included 12 oil producers, one gasser and three failures. Eleven of the new producers were completed in the Porter pool, Midland County, with Pure Oil Company's Hoyt B 4, SE SW NW Section 21, an inside location, the largest with an initial estimated at 3250 barrels. Pressure blew the tools from hole and damaged the master gate with the well flowing wild for six hours.

Possibility of renewed drilling on the south flank of the Porter pool developed this week with commercial showings from the Dundee horizon on two tests. Sun Oil Company's Frederick 1, NW NW SE Section 27, three-quarters of a mile south of the main pool, showed 1000 feet of fluid in the hole after drilling to 3450 feet, 51 feet in the lime. It probably will be acid treated. Bradner and Vaughan's Brennan 1, NW SW SE Section 27, a half mile south of the Sun-Frederick test, showed for about 35 barrels on the pump after acid treatment.

Completion of Pure Oil Company's Hicks 1, Porter township, SE SE SE Section 14, for 1125 barrels natural, first test in that Section which adjoins developed Sections 15 and 22 to the east, will bring some offset drilling.

Company, Well and Location	Init. Prod. Bbls.	Depth
MIDLAND COUNTY—		
Empire Ref. Co., Finch 2, Porter twp., se se se Sec. 20	75	3420
Richard Hall, Bond-Harris 1, Porter twp., se nw se Sec. 7	10	3424
McClanahan Oil Co., E. Brew 1, Porter twp., nw nw se Sec. 20	79	3440
Sun Oil Co., Frederick 1, Porter twp., nw nw se Sec. 27	25	3450
Pure Oil Co., Rayner B-2, Porter twp., nw nw nw Sec. 18	25	3439
Hoyt B-4, Porter twp., se sw nw Sec. 21	3250	3425
Neitzke 10, Porter twp., sw sw ne Sec. 21	2600	3425
Hicks 1, Porter twp., sw sw sw Sec. 14	1125	3430
Bradner-Vaughan, Brennan 1, Porter twp., nw sw se Sec. 27	30	3458
Fred Turner, St. John B-1, Porter twp., nw se sw Sec. 21	770	3426
Chas. Teater, Wale 8, Porter twp., sw nw nw Sec. 22	35	3418
ISABELLA COUNTY—		
Atha Oil Co., Regan-Mahar 1, Vernon twp., c nw nw Sec. 36	¶2½	1305
LAPEER COUNTY—		
W. C. Sowell, Kohler 1, Oregon twp., nw se sw Sec. 4	2	1412
OCEANA COUNTY—		
A. C. Mayer, Lidke 1, Hart twp., Sec. 16	*	1950
James Flannigan, Mast 1, Hart twp., Sec. 36	*	1920
MUSKEGON COUNTY—		
Muskegon Oil Corp., Gasser 1, Egelston twp., se sw ne Sec. 27	*	2290

*Failures; †Junked; ¶Million cu. ft. gas.

Pennsylvania Contributes Longer List of Wells

Cleveland, Ohio.—Pennsylvania, where completions in recent weeks have been few in number, came through with 21 new wells on the current report, including 19 producers of average small production. Ohio reported 27 completions, 12 oil wells and 11 gassers.

Details are as follows:

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
BRADFORD FIELD—		
D. Y. & M. Middaugh, Middaugh 1	4	....
Barry Bros., Bingham 1	15	....
D. Y. & M. Middaugh 2	3	....
Coast & Storms, Hanes 1	4	....
Ryder Scott Co., Scott 7	5	....
Corwin & Gallagher, Corwin 1	3	....
Cora M. Simon, Corwin 7	5	....
Andrus & McDowell, Bingham 326-6	4	....
Smith Oil Corp., Ziegler 1	3	....
Ziegler 2	3	....
Ziegler 3	3	....
Lincoln & Brink, Connelly 4	3	....
R. E. Hungiville, Bingham 2	3	....
F. L. Kinley & Co., Mantz 1	3	....
DeVore Oil Co., Kellogg 1	4	....
Forest Pet. Corp., Fee 71	2	....
Fee 72	2	....
VENANGO-CLARION COUNTIES—		
C. E. Jeammerat, Bowser 1	6	....
WASHINGTON COUNTY—		
E. H. & J. B. Tague, McKennan 9	¶	....
J. H. McCracken & Co., Saunders 1	¶	....
Amon & Co., Thomasy 1	5	....

SOUTHEASTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
COLUMBIANA COUNTY—		
T. R. Phillips & Co., Hahler 2	10	730
MONROE COUNTY—		
Ohio Fuel Gas Co., B. W. Blair 1	¶	1555
Shafer Farm Oil Co., O. Curtis 2	4	1417
T. J. Hamilton, F. Ridgeway 4	¶	1481
Hix Oil Co., M. C. Fisher 1	1	1300
McVey Bros., Myers & Co. 8	¶	1380
Wichorman Oil Co., Howiler 10	1	1694
WASHINGTON COUNTY—		
N. M. Oil & Gas Co., Holland 17	2	671
Turney & Co., Wm Ellis 9	2	490
JEFFERSON COUNTY—		
Ed. C. Collins & Co., S. & W. Traction 2	*	1600
NOBLE COUNTY—		
B. E. King, L. M. Crum 9	*	254

CENTRAL OHIO

ASHLAND COUNTY—		
Robinson & Co., W. S. Wolf 9	6	684
ATHENS COUNTY—		
Ohio Fuel Gas Co., Black Diamond Coal 8	¶	1047
Clyde Smith 1	¶	1654
GUERNSEY COUNTY—		
O. & W. Gas Co., Belle Peters 1	¶	1505
Ohio Fuel Gas Co., Black Diamond Coal 8	¶	1047
Clyde Smith 1	¶	1654
Belle Peters 1	¶	1505
Ohio Fuel Gas Co., F. R. Foraker 2	¶	1470
J. Johnson 3	¶	1376
Ferguson & McCullough, T. Stewart 2	¶	1470
HOLMES COUNTY—		
Kenova O&G Co., M. A. Neeler 3	5	3638
East Ohio Gas Co., S. H. Sterling 7	65	3504
MUSKINGUM COUNTY—		
Pure Oil Co., Donaldson 1	48	3112
Atha Oil & Gas Co., Osborne 1	*	3996
GALLIA COUNTY—		
H. W. Bowers, B. & O. Mink 1	*	330
STARK COUNTY—		
Hoover Development Co., Fee 3	¶	4569
VINTON COUNTY—		
Kachelmacher Estate, L. Eggleston 4	¶	821
MEDINA COUNTY—		
O. K. O&G Co., Jess McVickers 41	6	515

NORTHWESTERN OHIO

HARDIN COUNTY—		
Huffman & Co., R. C. Baher 1	4	....

KENTUCKY

HENDERSON COUNTY—		
Mayer Oil Co., Kennedy 2	50	....
OHIO COUNTY—		
Snowden-McSweeney Co., Kate Roberts 1	¶	....
M. G. & Grace Carpenter, Ida Kelley 8	5	....
Stewart-Weir Co., Dick Wells 1	25	....

*Failures; †Junked; ¶Million cu. ft. gas.

Ling-Belt Company Opens Warehouse in Dallas

In the interest of improving its service to the local trade, Link-Belt Company has recently opened a warehouse at 413-15 Second Avenue, Dallas, Texas, where extensive stocks will be carried of Caldwell and Link-Belt conveying and power transmitting machinery.

The new warehouse is located in what is commonly known as the gin neighborhood; occupies a floor space of 10,000 square feet, with 50 feet frontage on Second Avenue; and has convenient facilities for shipment either by rail or truck.

The company's sales office will also be located at the warehouse. E. G. Wendell is resident manager.

Drilling Reports On Important Wildcats

EAST TEXAS

ANDERSON COUNTY — Byrd-Frost, Inc. and Stanolind's Alice Scott-Pure 1 (300-a), Jas. Crawford sur, Slocum area, elev 398 ft, Pecan chalk 4379-4852 ft, Austin chalk 5281-5435 ft; pb from Woodbine sand 5455-5501 ft, showing salt water with trace oil to 5481 ft and abandoned. Guy Jameson, C. W. Byron, W. C. McGlothlin et al's S. N. Price 1 (60¼-a), J. J. Y'Barbo sur, Springfield-Blackfoot area, elev 512 ft, Pecan chalk 3114-3298 ft and Austin chalk 4292-4610 ft, abandoned in shaley-shells 5217 ft. Hunt Prod. Co. et al's A. L. Temple-C. A. Miller 1 (196.64-a), S. Sanchez sur No. 2-10, Long Lake area, lcn. Sun Oil Co.'s Robt. N. Erskine 1 (5203-a), Sam C. Box sur, Navarro Crossing, lcn.

CASS COUNTY—J. D. Kneen et al's E. M. Ball 1 (160-a), Cass Co. School Lands, spd & sd. Remley-Nelley & R. Kamon Group No. 1's Mrs. I. O. Savage 1 (121-a), Mary Patterson sur, elev 351 ft, Pecan chalk 2030-2488 ft, tested salt water 3707-3806 ft, sd to test lime 3815 ft. H. F. Wilcox et al's S. A. Orr 1 (316-a), G. W. Morris sur, elev 381 ft, testing 3887 ft. United Production Corp.'s T. J. Walton 1, J. Coleman sur, top Nacatoch 1455 ft and Pecan chalk 2079-2421 ft, dr 3280 ft.

CHEROKEE COUNTY—A. R. Lewis et al's Jess Bradford 1 (50-a), John Laprelle sur, sd 2835 ft. W. L. Stearns et al's W. L. Stearns 1 (89-a), S. A. Maverick sur, Boggy Creek field, lcn. T. J. Wood & Young's New Birmingham Dev. Co. 1 (160-a), Levi Jordan sur, elev 432 ft, Pecan chalk 3985-4306 ft, top Austin chalk 4840 ft, tested 30 bbls 40 gravity oil per hr ¾-in choke, td 5125 ft.

FREESTONE COUNTY—Walter L. Goldston et al's E. M. & C. H. Watson 1, R. D. Price sur, lcn. Clyde Creighton et al's W. A. Holley 1 (80-a), A. B. & M. sur, elev 399 ft, coring black shale 5285 ft. Trinity State Oil Co.'s Trinity River 1, Cayuga area, clearing lcn. J. E. Milburn & J. B. Patty's S. A. McAshan 1 (40-a), J. P. Fulton sur, lcn. Trinity Farm Securities Co. and A. A. Lander's Trinity Farm 1 (80-a), R. M. Williamson sur, lcn.

FRANKLIN COUNTY—Magnolia Pet. Co.'s J. M. Dupree 1 (640-a), W. D. Taliaferro sur, cmt surface pipe.

HENDERSON COUNTY—Gulf Prod. Co.'s Geo. M. Collins 1 (100-a), Wm. J. L. Scott sur, elev 667 ft, dr 2080 ft.

HOPKINS COUNTY—D. A. Hale et al's L. M. Hall 1 (70-a), A. Karo sur, A-143, near Miller Grove, dk.

HUNT COUNTY—M. O. Shawver et al's J. H. Jones 1 (99-a), Lydia Ferguson sur, elev 555 ft, Austin chalk 1180-2035 ft, lower Woodbine sand 3078-3108 ft, sd to cmt 7-in 3021 ft. G. S. & S. Co., John E. Golden's Oscar Popper 1, nw of Greenville, materials.

LAMAR COUNTY—Cole-Waggoner et al's W. B. Martin 1 (132-a), J. Deck sur, sd 2500 ft.

LIMESTONE COUNTY—C. M. "Dad" Joiner et al's S. A. Knapp 1 (676¼-a), Luke Moore sur, near Kosse, sd 1700 ft.

MORRIS COUNTY—Ginsberg Bros. et al's E. Hall 1 (177-a), Levi Jordan sur, sd 1700 ft. C. L. Simpson, Ralph A. Porter and W. Z. Beasley's P. M. Staggers 1, J. D. Nelson sur, sd 2330 ft.

NAVARRO COUNTY—W. J. Keeling et al's J. F. Rushing 1 (84-a), Henry Ford sur, dk. Bennett Bros. et al's T. E. Stewart 1 (83-a), W. R. Bowen sur, lcn. L. N. McCulloch et al's C. D. & J. L. Berry 1 (35-a), W. W. Moss sur, sd 300 ft. R. L. Wheelock-J. L. Collins, Magnolia & Humble's I. N. Cerf 1 (50-a), Jas. Smith sur, Trinity sand test on w side Corsicana-Powell field, dr 950 ft.

RAINS COUNTY—J. W. Halsell et al's T. F. Jones 1 (22-a), B.B.B.&C. Ry. sur, elev 425 ft, top Nacatoch sand 1610 ft, sd 2100 ft.

RUSK COUNTY—G. A. Hathaway et al's Gray 1, Jas. McLain sur, elev 315 ft, top Georgetown lime 3140 ft, sd 4460 ft. Geo. F. Hudson et al's Jeff H. Phillips 1-A, N. Villareal sur, top Pecan chalk 2412 ft, fsg 3585 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completion and wildcat reports in THE OIL WEEKLY.

* —dry hole, abandoned well.	oih —oil in hole.
‡ —salt water (completions.)	owdd —old well drilling deeper.
† —junked and abandoned.	owpb—old well plugging back.
¶ —million feet of gas.	pb —plugged back or plugging back.
abd —abandoned.	r —reaming.
bbls —barrels.	rog —rig on the ground.
br —building rig.	rur —rigging up rotary tools.
b.s. —basic sediment.	rust —rigging up standard tools.
csg —casing.	sd —shut down.
co —cleaning out.	sdtr —sidetracking
dd —drilling deeper.	sg —show gas.
dk —derrick.	si —shut in.
dr —drilling.	so —show oil.
fsg —fishing.	so & g —show oil and gas.
ft —feet.	spd —spudding.
hfw —hole full of water.	sr —straight reaming.
in —inches.	sw —salt water.
lcn —location.	td —total depth.
m —milling.	ur —underreaming.
mim —moving in materials.	wih —water in the hole.
mit —moving in tools.	wo —workover.
mot —milling on tools.	wocs —waiting on cement to set.
n, s, e, w, —north, south, east, west.	wosr —waiting on standard rig.

SMITH COUNTY—Cochran and Williams' Mrs. J. M. Dean 1 (100-a), B. Moore sur, lcn. Hunt Prod. Co.'s Henry Rayford 1, J. L. Dillard sur, elev 512 ft, Austin chalk 3775-3925 ft, top red beds 3972 ft, * 4054 ft. B. F. Phillips et al's (was M. M. Rowan) Gibbons Mfg. Co. 1, J. M. Garcia sur, elev 304 ft, sd 3830 ft. Preston Rose et al's E. Wiggins 1, H. K. Day sur, elev 479 ft, dr 1180 ft.

UPSHUR COUNTY—G. H. O. Oil Co.'s J. M. Floyd 1 (177-a), Robt. Raiford sur, sd 1085 ft. Lanier & Moore's M. Vaughn 1, P. B. Standifer sur, sd 1042 ft. B. G. Barnett & Randerson's W. S. Jones 1 (15-a), Jas. Dunn sur, dr 2810 ft. Joe Papadakis et al's L. V. Towery 1 (4-a), Wilson L. Parmer sur, dr shale 3705 ft. Eastern Texas Pet. Co.'s D. F. Smith 1 (640-a), T. J. McKey sur, elev 248 ft, Pecan chalk 2300-3030 ft, Austin chalk 3402-3560 ft, Woodbine sand showing oil 3573-3578 ft, sd to cmt csg. R. S. Randerson et al's J. H. Minor 1, R. D. Cannon sur, 3 mi ne of Coffeeville, Pecan chalk 2300-2860 ft, top Austin chalk 3510 ft, claim sg in Woodbine series, td 3750 ft, cmt 6⅝-in csg 3670 ft.

VAN ZANDT COUNTY—B. F. Blackman et al's C. E. Dorrill 1 (35-a), C. E. Rivers sur, sd 850 ft. C. A. Gilliam, Virgil Whitworth and Arthur Allen's A. T. Bass 1 (16-a), Wm. Hart sur, sd in Woodbine series 4210-4236 ft. Meyer & Rauch et al's P. E. Neil 1 (47-a), lcn. W. O. Smith-Rogers et al's J. H. Campbell 1, (100-a), N. S. Bratcher sur, dr 1500 ft. W. E. McKinney et al's V. T. Davis 1-A (3.66-a), sd 1166 ft. S. E. Miller Co.'s J. M. Palmer 1 (59-a), spd & sd. Peden-Olson Oil Co.'s W. S. Brannon 3 (45-a), lcn; Palmer 1, dr 1010 ft. Skinner et al's D. F. Cade 1 (28-a), sd 240 ft. Van Zandt Synd.'s Dr. C. S. Coker 1 (160-a), sd 1208 ft. J. D. Wrather et al's G. W. Carter 2 (10-a), dk.

WOOD COUNTY—D. T. Cauble & Mrs. J. C. Thompson's N. G. Bobbett 1-A (50-a), Daniel Fuller sur, Mineola area, elev 497 ft, Pecan chalk 2950-3234 ft, sd 5502 ft. McElreath-Suggett Oil Corp.'s B. D. Holley 1 (43.2-a), Thos. M. Moore sur, elev 474 ft, Austin chalk 4006-4112 ft, *n Woodbine sand 4490-4638 ft. Alex M. Snyder et al's J. T. Holmes 1 (122-a), A. N. McKnight sur, spd & sd.

SOUTH TEXAS

ATASCOSA COUNTY—Texas Pet. Co.'s T. W. Masterson 2, G. N. Mott Sur No. 386, dr 1335 ft.

BANDERA COUNTY—A. P. Crane & Co.'s Watson 1, dr 1202 ft, sand. Peerless O. & G. Co.'s R. G. Garrison 1, Sec 506, GC&SF Sur, prep to sp.

BASTROP COUNTY — Marts & Beavens' Davenport 1, 3550 ft swl & 200 ft nwl Thos. Garrettson Sur No. 19, dr 150 ft. Megehan & Vogel's W. P. Watts 1, Jno. W. Bunton Sur, ru. Ogden & Reed's Riddle 1, 25-acre tr, Jno. Maximillan sur, set 6⅝-in csg 2056 ft, td 2338 ft, broken chalk, so.

BEE COUNTY—Caeser Oil Co.'s R. E. Miller 2, F. Lewis sur, coring 3000 ft. Dash Prod. Co.'s Ruhman 5BB, no rept. Dirks Bros.' Skinner-Harris 1, ne nw nw Sec. 10, Ragley sub, J. M. Uranga Ranch, sd 3950-73 ft, tested 5 min, 290 lbs, 60 ft oil and mud, cmt csg, wocs. Heep Oil Corp.'s J. C. Wood 1, P. Crain sur, td 4708 ft, pb 4205 ft, recementing. Houston Oil Co.'s Miller 1, F. Lewis sur, tested 3020 ft, 450 lbs 5 min, sd 3099-3108 ft, show sw, dd. Phillips Pet. Co.'s T. P. Morgan 1, H. E. Eyles sur, td 6091 ft, 7-in csg 6081 ft, wocs. United Prod. Co.'s G. A. Ray 45, W. J. Porter sur, tested 4033-46 ft, 31 fourbles sw, 4 min, dr 4125 ft. Worth Oil Co.'s Seale 1, B. Q. Hadley sur, ru.

BEXAR COUNTY—Joe Beckley's Fee 1, Mt. Vernon Addn, S. A. townsite, sd 1270 ft, to complete as fresh water well. A. M. Blume's Louis Ridder 2, J. M. Baerrera Sur. No. 58, sd 1630 ft. Briggs & McPhee's Florence Lamb 1, M. de Luna Sur. No. 4, re-dr 425 ft; Randolph Carter 1, M. de Luna sur, ru and sd for water. Boles et al's Thos. R. Dillon 1, M. de Luna sur, set 240 ft sur csg, wocs. Medina Oil Co.'s Geo. W. Hendrickson 1, 700 ft sl and 400 ft wl, 103-ac tr, CB No. 4191, spd. Mid-Texas Corp.'s S. A. Exposition Park 1, dr 300 ft. C. A. Smith's H. J. Lamm 1, Jose de la Garza Gr, sr 982 ft. Thelma Oil Co.'s Watson 1, min.

CALDWELL COUNTY—S. S. Cargill's W. Damerau 2, D. Cooper sur, sd 2262 ft for water. Floyd Dodson's Smith Est. 1, S. Shupe Sur. No. 267, dr 1500 ft. Bob Keene et al's W. Ewald 1, J. George sur, sd 2228 ft. Joe Milles et al's E. Johnson 1, J. Pinchback sur, pull liner, sd 2110 ft. H. S. Morgan's Blackwell 1, J. R. Rains sur, spd.

CALHOUN COUNTY—Continental Oil Co.'s Am. Natl. Realty Co. 1, ne Sec. 6, Blk. C, set 1472 ft 13⅜-inch csg, wocs. J. H. Meek's Rydolph Adam 1, V. Garcia sur, mim. Southwest Oil Corp.'s E. H. Welder 1-A, Cuadrilla Sur. No. 8, td 6480 ft, was wocs; E. H. Welder 1-B, Day Lnd. & Cattle Co. A 228 sur, cor 3570 ft.

DE WITT COUNTY—Keystone Royalty Co.'s L. T. Burns 1, N. McNutt sur, dr 200 ft. Slick-Urchel's Poetter 4, O. Marshall sur, dr 4215 ft.

DUVAL COUNTY—Buffalo-Texas Dr. Synd., Inc.'s T. V. Saenz Escobar 1, San Francisco sur, sh 6, dr 2705 ft. S. B. Cloyes & W. P. Luse's Hagist 1, nw, Blk. 11, Sec. 265, td 2451, pb 2000 ft, sdtr, set csg to comp 2155-67 ft, wocs. Eagle Hill Oil Corp.'s J. R. Foster 1-C, Sec. 270, did not comp in Cole, 1495 ft, dd. Lewis & Beer's W. P. Peters 1, Blk. 18, Sec. 27, spd. J. R. Moore's W. R. Peters 1, Sec. 36, spd. G. G. Mortimer's W. R. Peters 1-B, dr 2100 ft. O'Byrne & Jennings' Juan Benavides 1, Blk. 6, Sec. 355, spd. Sun Oil Co.'s Moreno 1, Sec. 540, dr 3906 ft.

EDWARDS COUNTY—Lausen & Lausen's Turney 1, CCSD & RGNG Ry sur, Sec. 176, Blk. NW, dr 150 ft, lime. H. H. Sides' Turney 1, Sec. 164, CCSD & RGNG Ry sur, Blk. NW, dr 220 ft.

FRIO COUNTY—Amerada Pet. Corp's Halff & Oppenheimer 2, J. H. Gibson sur, set csg 4750 ft, wocs.

GILLESPIE COUNTY—E. L. Nixon's Lindig 3, J. Guerra Sur. 41, dr 170 ft.

GOLIAD COUNTY—Jim Kendricks & J. W. O'Byrne's Runge Natl. Bnk. 1, ru.

GUADALUPE COUNTY—Holdifield et al's Geo. W. Bailey 1, J. C. King sur, lcn.

HIDALGO COUNTY—Davis & Harrison's

Mrs. L. George 1, Tr. 13, Por. 41, Juris of Carmargo, dr 2000 ft. Union Sulphur Co.'s ARGL & I Co. 1, Lot 2297, Blk. 59, N. Capisallo Dist., dr 5550 ft. Woods et al's J. Lawrence 1, Por. 39, Tr. 274, Juris of Reynosa, sd 1050 ft water.

JACKSON COUNTY — Encino Gas Co.'s Simon & Seidel 1, Musquiz sur, re-dr 1600 ft.

JIM HOGG COUNTY—Sun Oil Co.'s Guerra 1-E, Sh H 14-A, Cuevitas Gr., dr 1500 ft.

JIM WELLS COUNTY—John F. Camp's B. W. Owens 1, Sec. 11, set sur csg 500 ft, sd. Putnam & Bode's S. McCarley 1, Casa Blanca Gr., dr 2900 ft.

KARNES COUNTY—R. E. Cezeaux's T. Campbell 1, J. R. Backer sur, ru. S. W. Forrester's Ruckman 1, Musquiz sur, dr 2500 ft. Fred Lovering's P. R. Goff Jr., 1, Martinez sur, re-dr below sur csg. Geo. A. Ray's Mrs. S. E. Radford 2, spd.

KENDALL COUNTY—Walter Bradley's W. Werner 1, J. F. Torrey sur, mit.

KERR COUNTY—Edmiston & Walker's Whitworth 1, Sec. 1439, fsg 135 ft. Jeff Love & Eastland Oil Co.'s Jeff Love 5, Sec. 1591, set sur csg 500 ft. G. F. Schreiner's Jeff Love 3, Sec. 1594, Martines sur, ru.

LEE COUNTY—James E. Pederson's C. A. Turner 1, D. Hudson sur, dr 1980 ft.

LIVE OAK COUNTY—Holmes & Goodwin's Fee 1, B. Haugherty sur, try to set csg 890 ft to comp as gasser. A. C. Smith et al's A. H. Gomillion 1, E. Jurdin sur, dr 925 ft. Unit Oil Co.'s Terrell 1, 1750 ft sl and 320 ft wl Christopher Scanlon sur, ¾ mi n Marbach gasser, ru. C. L. Witherspoon's W. J. Marbach 2, 1050 ft n No. 1-A and 600 ft e of wl, E. Jurdin sur.

McMULLEN COUNTY—C. A. Hall et al's H. L. Lark et al 2, E. W. B. Scrugham sur, set csg 1060 ft, leaking. Lefevre & Spice's Hagist 2, Sec. 17, H&TC Ry sur, 1862-1918 ft, sw, dd. H. D. Shelton et al's Jacob Corp. 1, W. D. Benham sur, dr 500 ft. C. C. Shumway's Shiner Ranch 1, Sec. 62, dr below 1000 ft. Stewart & Ormsby's Griffith 1, 600 ft n Loma Griffith 1, Griffith Farm Tr. No. 5, sd 927 ft; Griffith 2, 1700 ft w Loma 1, Griffith Farm Tr. No. 4, snd 919-24, so, set 6⅝-in csg 914 ft, wocs.

MEDINA COUNTY—Scoggins & Sanders' L. W. Burrell 1, M. E. Gage Sur. No. 395, 7 mi ne Castroville, dr 1143 ft, lime.

NUECES COUNTY—Benedum & Trees' J. O. Pickham 1, 1812 ft sl and 400 ft el, 204 ac tr, G. Faris sur, near Calallen, old well abnd 5004, re-instate to dd, hole clear. Diadem Oil Co.'s J. C. Mayo 1, Sec. 23, Geo. H. Powell sub of Driscoll Ranch, cor 5110 ft. Nutex Oil Co.'s King 1, Sec. 24, Richard King Farm Lots, td 6021 ft, clear hole to set csg. Sullivan Texon Royalty Co.'s Simmonds & Perry 1, Puentecitas Gr. 8, dr 6000 ft. Texas Seaboard Oil Co.'s Laurel Farms 1, Laural Farm Lots, Sec. 40, J. O. Chapman Ranch, spd. United Prod. Co.'s C. P. Talbert 2, W. P. Peters sur, Lot 9, Sec. 4, dr 5100 ft.

REAL COUNTY—H. J. Heartwell's M. S. Perry 1, sw Sec. 175, dr 1645 ft.

REFUGIO COUNTY—C. B. Bunte's F. B. Roke 2, Blk. 8, Anton de la Vina sur, dr 5143 ft; F. B. Rooke 3, Anton de la Vina sur, dr 5020 ft. Holland & Heard's Peck 1, Sec. 24, sand 5330-37 ft, tested 5321-37 ft 400 lbs and odor oil 10 min, cor to 5351 ft, prep to test 5337-51 ft. G. Jeffrey's Power 1, Garza & Vidauri sur, dr 3700 ft. Quintana Pet. Co.'s T. O'Conner 1, J. M. Swisher sur, sd 4912-50 ft, tested 825 lbs 10 min ¼-in choke core deeper. United Prod. Co.'s W. J. Fox 14, Hews & Brown sur, dr 4898 ft. W. J. Fox et al 15, Hews & Brown sur, fsg 5940 ft.

SAN PATRICIO COUNTY—Beasley & Maxwell's Saddler 1, Sec. 32, dr 2080 ft. C. B. Bunte's C. C. Smith 1, A. Armstrong sur, cor 5420 ft. Continental Oil Co.'s E. H. Welder 2, 455 ft S. & E. 1, Blk. 2, Villareal sur, mim. Circle W. Oil Co.'s E. H. Welder 1, Villareal sur, tr 5, sand 5360-78 ft, flow 115 bbls oil and 126 bbls sw first 12 hrs, pressure 1000 lbs on tubing and 1175 on csg on ⅛-in choke, prep to wo. Heep Oil Corp.'s Bob Welder 1, prep to ru. Plymouth Oil Co.'s Welder 2-A, J. & F. Portillo sur, set 1198 ft sur csg; Welder 1-B, Musquiz sur, ru.

STARR COUNTY—Garfield Bruell's Guarra 1, Sec. 10, mim. Merle Gunby's Block Bros. 1, Blk. 13, dr 200 ft. W. P. McDonald et al's E. A. Peffley 1, Sec. 933, cor 2390 ft; C. C. Bowman 1, Sec. 888, Blk. 13, sd 3215 ft for water. Sun Oil Co.'s Guerra 6-C, Sacatosa Gr., dr 2000 ft. Weekly Oil Co.'s M. M. Garcia 1, Share 40, Por 89, ru.

TRAVIS COUNTY—Humble's Mrs. Katherine Wells 1, James P. Kemp sur, set 64 ft sur csg wocs.

UVALDE COUNTY—Frank A. Brown's J. A. Millikan 1, Antonio Cruz Sur. No. 383, ream 740 ft. I. L. Evans' Dismukes 1, J. Kemp Sur. No. 652, dr 41 ft, limey clay. Evans & Thompson's Farris 1, John M. Hammond sur, sd 1050 ft for repairs. Humble's R. P. Anderson 1, J. J. Guerra sur, dr 2035 ft. T. T. Word's Truelove 1-A, Elam sur, set 400 ft 8¼-in csg.

VICTORIA COUNTY—C. & R. G. Dr. Co.'s R. C. Roos 1, M. A. Castanon sur, 5345 ft. Humble's Mitchell 1, P. Benavides sur, dr 4000 ft. A. M. McFaddin 1, C. O. Edwards sur, bldg dk; Agnes Murphy 1, Ximenes sur, spd. Petrol Corp.'s J. Machalec 1, R. Manchola Gr, sd 2835-41 ft, show oil, 7-in set 2828 ft, dr plugs.

WEBB COUNTY—Usher Carson's A. Webster D2, nw sw ne Sec. 684, test 3084 ft. J. W. Edwards' M. Vela 1, Blk. 7, Sec. 267, dr 2300 ft. French Oil Corp.'s R. Benavides 8-A, 750 ft wl and 1750 ft sl, Sec. 659, dr 150 ft. John D. Manley's F. Benavides 1, M. E. Hale sub, Arispe Gr., spd formerly reported in Duval County). United Prod. Co.'s Bruni Estate 1, Blk. 42, Sec. 8, Adams sub, Arispe Gr., 3410-18 ft, cannot bail oil below 2000 ft, csg pressure 250 lbs, completing.

WILLIAMSON COUNTY—G. L. Rowsey, Tr.'s Henry Sladek 1, H. White sur, Serpentine 840-84 ft, set 6⅝-in csg 810, td 994 ft, bail some oil.

ZAPATA COUNTY—R. B. Morrison's Los Burros Ranch 1, Blk. 4, Por. 19, dr 1030 ft. United N. & S. Dev. Co.'s N. Guerra & Son 1, Por. 55, coring 1665 ft.

TEXAS GULF COAST

AUSTIN COUNTY—Sun Oil Co.'s Zetik 1, S. M. Williams sur, coring water sand (salt); drill stem test 2823-2903 ft, ¾-in choke on top and bottom, 15 min, 23 thribbles fresh water, slight sg.

BRAZORIA COUNTY—Holt et al's Griffith 1, J. B. Bailey sur, mim. W. H. McCarthy et al's Nalt Life Ins. Co. 1, H. Austin No. 4, A-21 sur, dk.

BRAZOS COUNTY—H. L. Bleam's Harrison 1, Allacorre sur, lcn.

BURLESON COUNTY—McDavid & Pressley tr's Atascosa State Bank 1, J. Reed sur, lcn. Southern Seaboard's Coulter 1, A. Kennon sur, dk.

FT. BEND COUNTY—H. M. Naylor's Gehr 4, Kenney sur, sd 5456 ft; Gehr 5, S. Kenney sur, lcn.

GALVESTON COUNTY—C. R. & G. Drlg. Co.'s Spoor 1, W. K. Wilson sur, dr 5312 ft shale. Humble O. & R. Co.'s Maco Stewart 1, J. Sellers sur, dr 1200 ft.

HARDIN COUNTY—Pharr et al's Bernard 1, H. & T. B. No. 69 sur, pb and sdtr to dr back into sand. Danciger Oil Co.'s Mary Hooks 2, W. Donahue sur, standing 4555 ft. Alpha Pet. Co.'s Steinberger 1, H. Williams sur, dr 950 ft. Wilcox Oil & Gas Co.'s Sternberg 1, G. Dorsey No. 1 sur, spd.

HARRIS COUNTY—Foster et al's Johnson 1, C. C. & S. F. sur, sd. J. E. Seiber Tr.'s Tyrell & Carth 1, Highland sub, dr shale 5816 ft. W. U. Paul's House 1, M. Magruder sur, set 10-in csg 1000 ft, wocs.

JASPER COUNTY—Louis Franklin's Cartwright 1, E. Legrand sur, dr 4336 ft.

JEFFERSON COUNTY—Sun Oil Co.'s Long 1, John Blair sur, set 9-in csg 6238 ft with 500 sacks of cement, wocs.

LIBERTY COUNTY—Gulf Prod. Co.'s Kirby C-2, J. Pleasant sur, pb 5600 ft, whipstocked at 5650 ft to test sands in upper Cockfield; Kirby C-4, same sur, skidded 550 ft east. Liberty Independent Oil Co.'s J. M. Neal 1, S. Strong sur, dr clay and gravel 1120 ft. H. Sample's Security Trust Co.'s 1, J. Faulk sur, dr 6600 ft.

MADISON COUNTY—Hall Edward's Flucher 1, F. Flucher sur, set 12½-in csg 520 ft, dr 2050 ft.

MATAGORDA COUNTY—Dr. Griffith's Fee 1, W. E. Bell sur, mir.

MONTGOMERY COUNTY—Baker et al's Benker 1, L. H. M. Washington sur, abd 4670 ft. Deering & Frazier's L. Hicks 1, T. Taylor sur, sd. Humble O. & R. Co.'s Texas Long Leaf Lumber Co. 1, Walker School Land sur, coring ahead below 5878 ft. Smith & Cooper's Post 1, D. Roper sur, coring below 3783 ft. Steen Drilling Co.'s Texas Long Leaf Lumber Co. 1, Walker School Land sur, set 5-in csg 5841 ft, washed 35 minutes at 5801 ft, in 8 minutes showed pressure of 2100 pounds, gravity of distillate 57.4.

ORANGE COUNTY — Texas-Louisiana Oil Co.'s Lutcher Moore Lbr. Co. 1, Ben Johnson sur, dr shale 4875 ft.

POLK COUNTY—Alpha Pet. Co.'s Kirby & West 1-B, G. S. Thomas sur, dr 780 ft shale. Howard Dailey et al's Knox 1, F. Chairs sur, dk. J. Z. Werby's Whittforth 1, A. Viesca sur, abd. 4580 ft.

SAN JACINTO COUNTY — Turnbull & Irwin's Foster Lbr. Co. 1, William Dobie sur, dr 4850 ft.

TYLER COUNTY—Boone Wallace Lane's J. A. Crews 1, S. L. Graham sur, mir.

WALKER COUNTY — Strake Pet. Corp.'s Thompson 1, 2 mi se of New Waverly, near the Walker & Montgomery County lines, Jackson Grouch sur, lcn.

WALLER COUNTY — Amerada - Stanolind's Mary Monor 1, sec 9-3, H. & T. B. R. R. sur, sur, coring ahead 6591 ft. Capps & Sloane's Vaughn 1, J. McFarland sur, dr shale 2850 ft.

LOUISIANA GULF COAST

ACADIA PARISH—Superior Oil Co.'s Arceneaux 1, 28-8s-3e, mim. Leo Kahn 1, 33-8s-3e, dr 5328 ft. Richard Lovnattie 1, 34-8s-3e, dr 3729 ft. E. Mire 1, 33-8s-3e, dr 3395 ft. Standard of Kansas Oil Co.'s Nouton 1, 34-8s-3e, mir. Woodley Pet. Co.'s Daigle 1, 34-7s-1e, dr 1350 ft.

BEAUREGARD PARISH — Federal Pet. Co.'s Lutcher Moore 1, 4-7s-12w, dr sand gravel 866 ft; Lutcher Moore B-1, 290 ft w & 230 ft n of center of 26-6s-13w, lcn. F. W. Martin et al's Cochran 1, 34-4n-12w, Vicksburg 4130-4520 ft.

CALCASIEU PARISH — Union Sulphur Co.'s Barbe Est. 2, 11-9s-8w, wocs 1500 ft.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake 10-A, 1-14s-9w, dr 3812 ft.

JEFFERSON DAVIS PARISH—Tide Water Oil Co.'s Aimea Bourgois 1, 28-9s-5w, dr 3500 ft. Shell Pet. Corp.'s R. C. Jarnigan 1, Roanoke prospect, east offset to Kratzer 1, 660 ft s & 300 ft e of nwc of ne 12-9s-4w, mim.

LA FOURCHE PARISH—Ben Coyle's La Fourche Ld. 1, 32-18s-22e, dr shale 2781 ft. R. L. Gay's Gedchaux 1, T15s-R19e, dr shale 2100 ft.

ST. BERNARD PARISH — Joseph Danciger's Delaereis L. & F. Co. 1, near Oliver, 127-14s-14e, mim.

ST. LANDRY PARISH—Superior Oil Co.'s Iseringhouse 1, 35-8s-3e, dr 4967 ft. Marcellos Saveie 1, 27-8s-3e, last returns about 1200 ft; skidded 125 ft; dk.

PLAQUEMINES PARISH—Gulf Refining Co.'s La Fourche Basin Dist 1, Lake Hermitage, 6426 ft s, 6409 ft w of nec of T18s-R25e, well being in sec 11, mim.

ST. MARTINS PARISH—The Texas Co.'s St. Martin Ld. Co. 1, 17-8s-7e, dr shale 6161 ft.

OKLAHOMA

ATOKA COUNTY—Malernee et al's Greenville National Bank 1, nw sw 36-2s-13e, 8-in csg 1667 ft, sg 1665-1677 ft, td, sd.

CADDO COUNTY—Denver P. & R. Co.'s Noe 1, nw sw sw 34-10n-10w, well dead, dr 10,190 ft.

CARTER COUNTY—Hudson and Poland's Sullivan 1, ne se 5-5s-1w, dr 1160 ft brown shale. George Pace et al's M. Jack 1, ne nw nw 10-4s-4w, (formerly reported in 10-4s-2w), spd 50 ft. McHenry et al's Ratliff 1-A, nw sw 28-1s-2w, mim.

CLEVELAND COUNTY — Phillips Petroleum Co. et al's Community-Baker 1, cse nw 11-9n-2w, dr 3680 ft.

COAL COUNTY—Moore & Deaner's Ed-

wards 1, nw ne se 27-2n-8e, Wapanucka 4658 ft, core 4858-4861 ft. Brookshire et al's Rowland 1, nw ne ne 18-3s-10e, dr 3537 ft sand and lime, 700 ft fluid in hole.

COMANCHE COUNTY — F. F. Stevens' Green 1, se sw 2-1n-13w, dr 888 ft. Heiden-Taylor's Crutcher 1, sw ne 11-1n-12w, td 1196 ft, co, (formerly reported as Herden-Taylor's Crutcher 2, cne). Heiden-Taylor's Critcher 2, cne 11-1n-12w, dr 615 ft.

COTTON COUNTY—Ben Russell's Fowler 1, se nw 21-4s-12w, dr 2565 sandy lime.

HUGHES COUNTY—Scruggs et al's Black 1, nec 13-9n-10e, sd for orders. J. B. Hill et al's Perkins 1-A, cw½ sw sw 7-5n-9e, sd for orders 1025 ft.

JOHNSTON COUNTY — Oklahoma Oil Corp.'s (unknown) 1, sw ne se 11-2s-8e, cellar.

KAY COUNTY—W. Earl Witt et al's Patton 1, sw se 4-28n-2e, digging pit.

KINGFISHER COUNTY—Jadeka Development Co.'s Frakes 1, csw ne sw 16-15n-6w, sd 3068 ft.

KIOWA COUNTY—Bailey & Johnson's Potts 1, nw sw (corrected from sw nw), 31-7n-14w, dr 280 ft.

LEFLORE COUNTY—Murdock et al's Fee 1, sw ne sw 15-5n-25e, fsg 2425 ft. East Oklahoma Oil & Gas Co.'s Metcalf 1, swc 2-4n-26e, dr 1505 ft.

LINCOLN COUNTY—The Texas Co.'s Gessman 1, se ne 33-14n-4e, co 4220 ft. Mid-Continent Pet. Corp.'s Bolby 1, cse sw 27-12n-2e, mim.

LOGAN COUNTY — W. N. Anthony's Fruin-Eckman 1, se sw 4-16n-1e, set 15-in csg 140 ft, wocs.

McCLAIN COUNTY — Carter Oil Co. et al's Hanner 1, sw ne sw 24-5n-1w, Sylvan 6275 ft; Viola 6425; Simpson 6500-6526 ft, td, lost drill pipe. Plugging and abandoning. Denver P. & R. Co.'s Newborn 1, cse sw 22-5n-1e, dr 4595 ft.

MURRAY COUNTY—T. E. Revels et al's Wolfe 1, ne c 18-1n-2e, run 132 ft of liner and sd 2315 ft. Gilcrease Oil Co.'s Brown 1, swc 26-1n-2e, dr 1335 ft.

NOBLE COUNTY—The Texas Co. et al's Vosa 1, sw ne se 28-22n-2w, Oswego 4290-4460 ft; Bartlesville 4575; core 4575-4581; dry; dr 4581 ft. Magnolia's Crawford 1, se nw 27-21n-2e, digging pits and cellar. Continental Oil Co. et al's Bennett 1, se nw 19-20n-1w, Oswego 4434 ft; core 4433-4440 ft, recovered 7 ft (one ft shale and six ft lime), small show of oil, dr 4630 ft.

OKFUSKEE COUNTY—Delton Oil's Fixico 1, sec 7-11n-8e, rog.

OKLAHOMA COUNTY—Gypsy Oil Co. et al's Community-Grant 1, cse nw 27-13n-4w, Pawhuska 3620 ft; Layton 5215; dr 5620 ft. Springrose Development Co.'s Edwards 1, cse se 19-11n-1e, Sylvan 6282 ft; td 6297 ft; dr in new hole 6252 ft.

OSAGE COUNTY—Empire Oil & Refining Co.'s 1, se ne 3-25n-3e, sand 2403-2423 ft; Layton 2570-2621, pumped 127 bbls oil and 60 bbls water on May 27; pumped 27 bbls oil and 27 bbls water in six hrs on May 29, testing. Peters Petroleum Co. & Norbla O&G Co.'s 1, swc 15-25n-5e, dr 1425 ft. Norbla O&G Co.'s 1, nw se 31-24n-7e, set 12-in csg 450 ft, dr 570 ft.

PAWNEE COUNTY — George Thomas' School Land 1, swc 13-20n-5e, dr 3620 ft.

PITTSBURG COUNTY—Exchange Drlg. Co.'s Chunn 1, se se nw 29-4n-14e, (formerly reported as Stencil O&G Co.), dr 350 ft.

PONTOTOC COUNTY — Riddle et al's Barnes 1, se nw se 21-5n-4e, dr 1490 ft. Boyle et al's Newbern 1, sw ne 31-5n-4e, sand 1678-1680 ft; small so 2039-2048 ft; core 2048-2051 ft in lime and shale, small so; dr 2190 ft. Emanuel, Rudman & Natcher's Mayer 1, csw se nw 7-3n-8e, ur 8 in, td 1285 ft. Dandridge et al's Stafford 1, nw c 5-1n-6e, td 668 ft, 10-in cas collapsed. Paul R. Robb's (owdd) Vittetoe 1, cne se 11-5s-4e, td 4937 ft, drill pipe stuck.

POTTAWATOMIE COUNTY — Stanolind O&G Co. and Amerada Petroleum Co.'s Goodman 1, sw ne ne 5-10n-4e, rig.

SEMINOLE COUNTY—Tate & Starbuck's Heard 1-A, se nw 9-6n-7e, sr.

KANSAS

BARTON COUNTY—Atlantic Oil Producing Co.'s Straud 1, cse nw 36-18s-11w, rig, (location corrected from cse ne). Harris-Haun & J. Brouk's (formerly reported as J. Bronk) Dietz 1, ne sw 21-16s-15w, rig. National Refining Co.'s Ingersoll 1, cnw ne, 2-19s-13w, td 1810 ft, fsg (location corrected from cne nw). Walter Shearan et al's Kimpler 1, se ne ne 31-18s-11w, sd 250 ft.

BUTLER COUNTY — L. C. Hay et al's Bolin 1-A, se sw se 36-26s-6e, pumped 8 bbls oil and 6 bbls water. Tom Palmer & Darby Oil Corporation's Harder 1, nw se nw 27-24s-3e, lime 3204-3264 ft, td, may abandon.

CHAUTAUQUA COUNTY—Lerke et al's Mason 1, cne ne 5-31s-10e, hfw 1564 ft, td sd.

CLAY COUNTY—Seidel Bron's Younker 1, cs/2 se nw 21-9s-4e (formerly reported as Seidel Bron's Glace 1, ne sw), spd 60 ft sd.

DICKINSON COUNTY—Dutch Oil Co.'s Phillips 1, cne nw 15-15s-1e, sd 1355 ft.

FINNEY COUNTY—National Refining Co. et al's Smith 1, cse sw 2-23s-29w, sd for orders.

KINGMAN COUNTY—Kessler et al's Bollinger 1, sw nw sw 12-28s-5w, dr 2800 ft.

LYON COUNTY—Aikman & Baker's Hind 1-A, ne nw 30-21s-12e (formerly reported as Arkman & Baker), set 6-inch csg 1860 ft, sand 1915-1948 ft, lime 2014-2015 ft, td, dry and abandoned.

McPHERSON COUNTY — Continental Oil Co. et al's Graber 1, ne nw 32-21s-1w, (formerly reported 34-21s-1w), base Miss lime 3224; Hunton 3274-93 ft, td, 1400 ft oil in 7½ hrs. Marileen Oil & Gas Co and Goering Brothers' Decker 1, nw se 20-18s-1w, set 15 in csg 450 ft, td; wocs. Tom Palmer's Nordling 1, se sw 19-18s-2w, set 8 in 2855 ft; base lime 2894; Hunton 3040-3050; Viola 3190 ft, set 6-in csg 3192 ft; td 3196 ft; 2000 ft oih.

NEMAHA COUNTY—Portland & McKenna's Sudbeck 1, sw nw nw 20-1s-12e, sd 490 ft.

OSBORNE COUNTY—Carmen & Hershey's Fritz 1, cne ne 9-10s-14w, dr 700 ft.

RENO COUNTY—Sinclair Prairie Oil Co.'s Shepherd 1, se nw 22-26s-9w, dr 1890 ft. L. H. Wentz's Milcalf 1, se ne sw 3-24s-7w, dr 1710 ft. Foraker et al's Hiett 1, se sw ne 34-24s-4w, cellar. Atlantic Oil Producing Co.'s Phillips 1, ce/2 nw ne 22-22s-6w, Chat 3511 ft, dr 3575 ft.

RICE COUNTY—Langston et al's Markle 1, ne ne sw 1-20s-9w, 12-in csg 1194 ft, dr 1270 ft. Mid-Kansas Oil & Gas Co.'s Proffitt 3, ne nw nw 5-20s-9w, rust. Aylward, Trees et al's Belder 1, sw se ne 27-20s-7w, hfw 2415-2425 ft, td 2615 ft, ur 8-in. Reserve Development Co.'s Heinz 1, ne sw se 8-18s-10w, pulled 6-in, set 8-in csg 3058 ft; so 3184-3185 ft; Siliceous 3256 so sw 3260-3264 ft; td 3269 ft; 500 ft wih; sd for orders. Continental Oil Co., Empire Oil and Refining Co. & Shell Petroleum Corp.'s Bennett 1, nw se 25-18s-8w, (formerly reported in cse), 500 ft oil and mud in hole; dr 3143 ft, no increase.

ROOKS COUNTY—Ashby et al's Doughty 1, csw sw 15-8s-19w, fsg 925 ft. Phillips Pet. Co.'s Dopita 1, csw sw 31-8s-17w, swab 112 bbls in 7 hrs; 1000 gal of acid; swab 88 bbls in 2½ hrs; pipe trouble.

RUSH COUNTY—Central States Light & Power Co.'s Basgall 1, 10-17s-16w, lcn.

SEDGWICK COUNTY—Trees Oil Co. and Derby Oil Co. et al's McMinn 1, nw sw ne 36-26s-1e, (formerly reported 36-26n-1e and in Kay County), spd. Sovereign Oil Co.'s Nichols 1, cnw se 20-25s-1w, dr 1165 ft.

SUMNER COUNTY — Morgan & Flynn's Mercer 1, nw ne nw 36-32s-nw 36-32s-1w, set 12-in csg 1168 ft, dr 1560 ft.

STAFFORD COUNTY—Stanolind Oil & Gas Co.'s Denkler 1, 693 ft south & 330 ft east 10-22s-12w, set 13-in csg 260 ft, td, wocs.

TREGO COUNTY—Alma Pet. Co. et al's Rhodes Estate 1, csw sw 14-11s-23w, so 3578-3592 ft; est 10 bbls 3619-3620 ft; dr 3624 ft, hfw.

WOODSON COUNTY — Sheedy et al's Street 1, nw se nw 28-24s-14e, show water 1825 ft, sd.

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SHREVEPORT, LOUISIANA

NORTH LOUISIANA

BIENVILLE PARISH—Hibeltha Oil Co.'s Woodward 1, nw nw 26-15-9w, dr 1620 ft.

BOSSIER PARISH—Jno. L. Anderson, Tr.'s Leonard 1, sw sw 19-19-13w, dr 3300 ft. Howard & Bird's Sam Gold 1, nw ne 36-20-13, rur. L. M. Moffitt et al (Rocky Mount Syndicate), C. A. Antrim 1, sw ne 26-22-12, dk and mit. L. E. Norton's J. E. Adger 1, se sw 2-20-13w, lcn abd. Producers O&G Co., Inc.'s J. J. Leviston 1, se se 13-16n-12w, rur. W. H. Werner 1, se se 7-17n-11w, mov in heavier rig, sd 3211 ft.

CADDO PARISH—W. T. Bell et al's Bostick 1, 12-22n-16w, sd 2460 ft. J. T. Humphrey et al's J. C. Powell 1, nw se 14-19-15, dd 2403 ft. A. F. Tarver's Muslow Oil Co. 1, nw sw 3-22n-15w, dr 1100 ft.

CALDWELL PARISH—Terrell & Price's La. Central Lbr. Co. 1, nw ne 18-11n-3e, dr 2725 ft.

CLAIBORNE PARISH—United Gas Pub. Serv. Co.'s Carter Unit 1, 32-20n-5w, wocs 9-in csg 4175 ft.

DE SOTO PARISH—L. H. Alderson's P. B. Peak 1, nw ne 25-11n-13w, sd 1698 ft. S. J. Barber's Horton 1, sw sw 4-11n-11w, wo csg 2735 ft. R. E. Collins' A. M. Thigpen 1, nw ne 29-15n-12w, dr 1990 ft. Dempsey & Manziel's Thigpen 1, sw ne 33-13n-13w, sd for water 1605 ft. Hirschfield Bailey et al's Youngblood 1, ne ne 9-11n-14w, sd 1502 ft. Geo. Le Grand's D. T. Fulmer 1, nw sw 1-11n-16w, sr 1007 ft. E. T. Oakes' Johnson 1, ne nw 30-13-16, dr limey shale 5153 ft.

GRANT PARISH—L. L. Lindsay, Jr.'s Edenborn 1, se se 13-7n-4w, co 2360 ft.

NATCHITOCHES PARISH—Jack Lent et al's Brown Lbr. Co. 1, ne sw 27-9n-9w, mim. Missouri Drlg. Co.'s Brown Lbr. Co. 1, se se 5-10-10, 10-in csg 40 ft. Penn Southern Pet. Co.'s Chopin Lbr. Co. 1, ne sw 4-5n-5w, top Cockfield 1260 ft, dr 3475 ft. Plummer McDaniel's Lizzie Walmsley 1, se sw 45-10n-8w, dr 2200 ft. J. B. Storey's W. W. Page Est. 1, se nw 18-8n-9w, repr rig 1480 ft. Roy Raines et al's Fee 1, sw sw 28-9n-10w, rog.

OUACHITA PARISH—Wilson & Mitchell's W. L. Williams 1, sw se 5-16-1e, mot td 2763 ft.

RED RIVER PARISH—Louis L. Glass' G. H. Dickson 1, nw se 32-12n-8w, dk.

SABINE PARISH—G. H. Collins' Bellieu & Carter 1, nw sw 21-9n-13w, sd 900 ft. M. J. Kissick's Barr 1, sw se 6-4n-12w, dr 3400 ft. Sirmon 1, sw se 11-4n-13w, spd 10-in csg 146 ft. Geo. L. Pace's De Soto Corp. 1, ne sw 27-10n-13w, dr 845 ft.

WEBSTER PARISH—Geo. W. Weatherbee et al's Clark 1, ne se 1-18n-10w, dk.

ARKANSAS

CALHOUN COUNTY — Mid-American Oil Corp.'s J. H. Plunkett 1, nw sw 15-14-15, spd sd 50 ft.

COLUMBIA COUNTY—O. F. Whittaker's C. C. Hall 1, se ne 10-15-20, dr 1220 ft.

CONWAY COUNTY—Southern Union Gas Co.'s Feldman 1, 6-5n-17w, sd for water 2865 ft.

HEMPSTEAD COUNTY—A. G. Bagnell et al's Rheinhart 1, sw sw 2-13s-26w, dr 1585 ft. Clarco O&R Co.'s Jones 1, ne se 11-14-24, rog.

LA FAYETTE COUNTY—Earl F. Fox's Coleman Bros. 1, nw ne 36-16-25, rur. Douglas Lawn's Camp 1, sw se 14-15-23, dry 1619 ft, dr 1630 ft. C. V. Lenz's L. A. Foster 1, ne se 9-15-25, dr 2715 ft.

LEE COUNTY—Ark. La. P. L. Co.'s E. McDonald 1, sw sw 28-1n-4e, rur.

MILLER COUNTY—Fitzwater et al's H. E. Beck 1, nw sw 34-15-26, lcn. King Oil Corp.'s C. H. Schroder 1, sw ne 24-14-28, wo heavier rig. W. F. Lacey's Gibson 1, sw nw 30-19-27, spd, 10-in csg 84 ft. Magnolia Pet. Co.'s Olivet 3, ne ne 4-16-26, lcn. C. E. Murdock's Beck 1, sw se 33-15-26, wosr, 2929 ft. E. L. Beck 2, se se 33-15-26, rur. Thorn Tree Oil Co.'s H. E. Beck 1, sw sw 34-15-26, swabbing 2923 ft. Lee Timberlake's E. L. Beck 1, nw se 33-15-26, dr 2100 ft. J. K. Wadley's Deckerman 1, sw nw 24-17-27, dr 4415 ft. Jno. Wrather's Olivet 1, nw ne 4-16-26, spd, dr 300 ft. E. L. Young's R. M. Patterson 1, se ne 5-19-28, 6⅝-inch csg 3635 ft, wocs, td 3655 ft, (corrected depth.)

MISSISSIPPI

AMITE COUNTY—Mineral Resources, Inc.'s Anderson 1, ne nw 14-3n-3e, dr 900 ft.

FRANKLIN COUNTY — E. R. Ratcliff's Homochitto Lbr. Co. 1, se se 20-5n-2e, sand 3144 ft, core sand and gummy shale 3176 ft.

GREENE COUNTY—United Gas Pub. Serv. Co.'s Davis 1, nw nw 30-1n-5w, core 6658 ft.

ISSAQUENA COUNTY—Pelican Oil & Gasoline Co.'s Steel Bayou Corp. 1, sw nw 14-12n-8w, dr sand 1800 ft.

MADISON COUNTY—H. A. Wilson Tr.'s Cepek 1, sw ne 24-9n-3e, co 2300 ft.

NEWTON COUNTY—Dalton Dev. Co.'s Majure 2, 25-6n-11e, co 3350 ft.

PEARL RIVER COUNTY—Gulf Ref. Co.'s May L. Williams 1, se ne 35-5s-17w, set 7-in csg at 3800 ft, td 3920 ft.

SIMPSON COUNTY—Berry Corp's R. T. Berry 2, sw sw 33-2n-4e, dr 1200 ft.

WALTHALL COUNTY—Mutual O&G Co.'s Boyd 1, sw sw 19-2n-10e, rog.

WASHINGTON COUNTY—Perkins & Dee's Lee 1, nw sw 33-15n-8w, spd.

ALABAMA

CLARKE COUNTY—Magnolia Pet. Co.'s Scotch Lbr. Co. 1 ne ne 17-10n-3e, elev 354 ft, mim.

HOUSTON COUNTY—Rice O&G Co.'s Oakley Est. 1, nw sw 9-3n-29e, dd 1159 ft.

LAMAR COUNTY—DeSota O&G Co.'s Gardner 1, nw nw 22-15-16, sd 4122 ft.

PIKE COUNTY—Bill Rowe et al's Bank of Troy 1, 36-10-21e, lcn.

TENNESSEE

HAYWOOD COUNTY—E. R. Henderson et al's Jarrett 1 (formerly carried Fee 1), near Brownwood, spd.

FLORIDA

DADE COUNTY—Price O&G Co.'s Internal Improvement Fund 1, 6-55s-35e, mit. East Coast Oil & Nat. Gas Co.'s Warick 1, 12-55s-40e, retaking leases. Miami, Fla., Oil Co.'s Chevalier Corp. 1, 19-54s-35e, sdtr junk td 4560 ft.

WALTON COUNTY—Oil City Corp.'s Walton L. & T. Co. 1, ne nw 12-1n-19w, mit td in new hole 4400 ft.

CALIFORNIA

KERN COUNTY

BUENA VISTA LAKE—Ohio Oil Co.'s K. C. L. 1, 31-31-26, froze pipe, td 7957 ft, shot off drill pipe 5700 ft, plugging back to test upper gas showing.

COMANCHE POINT—Comanche Oil Co.'s No. 1, 15-32-29, sd 3387 ft. Metropolitan Dev. Co.'s No. 1, 23-32-29, rur.

EDISON—Elyod Pet. Corp.'s No. 1, 19-30-30, to run formation tester, td 1670 ft. Mt. View Dev. Corp.'s Spangler 1, 12-30-28, rur.

McKITTRICK—Shell Oil Co.'s Midway Premier 1, 21-29-21, dr sand & shale, 4590 ft. Standard Oil Co.'s No. 45, 15-30-22, dr gray sand 2815 ft. Welport Oil Co.'s No. 105, 26-29-21, fsg bit 1049 ft.

NORTH MIDWAY—Midway Peak Oil Co.'s No. 1, 3-32-22, rur.

NO. SEMITROPIC — S. T. Alexander's Shields 1, 29-25-21, sd 1426 ft.

PIONEER ANTICLINE—Fisher & Welton's Harris 1, 35-11-23, dr shale 585 ft.

TEMBLOR HILLS—Robt. Foster's No. 1, 2-32-22, dr shale 500 ft.

UNION AVENUE—Alta Oil Corp.'s N. C. 1, 6-30-28, td 6457 ft, pb to 4040 ft, pumping 30 bbls 18 gravity oil, cut 10 percent.

WHEELER RIDGE—Badger Oil Co.'s El Tejon 1, 31-1-19, td 5987 ft, r and dd.

KINGS COUNTY

AVENAL—Carl Weller's Baby King 2, 11-23-16, sd 892 ft.

TULARE LAKE AREA—Armadillo Gas Co.'s No. 1, 32-22-20, dr shale 1780 ft. Commonwealth Cons. Gas Co.'s No. 1, 21-22-20, rep. equip., 1581 ft. Tulare Basin Gas Co.'s No. 2, 2-23-19, cmt 4¾-in 1190 ft.

MADERA COUNTY

DOS PALOS—Pure Oil Co.'s No. 1, 7-10-14, dr sand & shale 1650 ft.

SAN JOAQUIN COUNTY

TRACY—Milham Exploration Co.'s Connolly 1, 5-4-5, dr sand and shale 4780 ft.

SANTA BARBARA COUNTY

CASMALIA—Casfite Co.'s Casito 1, spd May 26, dr. O. C. Field Gaso. Corp.'s Righetti 1, 14-9-35, lcn.

GOLETA—Shell Oil Co.'s Bishop 1, 20-4-28, grading roads. Hastain Stone's Simonds-Camp 1, 9-4-28, sd 2710 ft.

LOMPOC—Lompoc Pet. Co.'s Beauterbaugh 2, 18-7-34, co 2432 ft.

SANTA MARIA—Union Oil Co.'s Moretti 1, 24-10-34, rur.

SAN LUIS OBISPO COUNTY

CHOLAME—Willett Oil Assn's Jack 2, 10-25-15, dr shale 750 ft.

VENTURA COUNTY

BARDSDALE—H. H. Humphries' No. 1, 18-3-19, dr shale 275 ft.

CONEJO—American Oil Co.'s Powell 1, 33-2-20, sd 3060 ft.

FILLMORE—Laing & Jacob's Snodgrass 1, 32-4-19, sd 700 ft.

HOPPER CANYON—Hancock Oil Co.'s Hadley 5, 3-4-19, sd 3357 ft. Oil Ridge Oil Co.'s Maron 3, 1-4-19, dr shale 915 ft.

LOS POSAS—Los Posas Pet. Co.'s Mahan 1, 22-3-20, dr shale with streaks oil sand 6550 ft.

OJAI—Gardner Royalties' No. 1, 12-4-20, pumping 25 bbls 17 gravity oil, 1545 ft.

PIRU—Bolsa Chica Oil Corp.'s Snow 1-A, 4-4-18, sd 2497 ft. Piru Oil Co.'s Holser 1, 14-4-18, rust after spd.

RINCON—Woodrow Pet. Corp.'s Woodrow 1, 4-3-24, sd 7615 ft.

SANTA PAULA—J. W. Mosher's No. 1, 22-4-21, set 6¼-in csg at 1620 ft, wocs, td 2010 ft.

SESPE—H. A. Ivers' No. 11, 1-4-20, dr shale 900 ft. Merchants Pet. Co.'s Cochran 4, 1-4-20, cmt 10-in csg 420 ft, td 1280 ft. Topa Oil Co.'s No. 1, 35-5-19, fsg bailer 3090 ft.

SIMI—American Drilling Co.'s No. 1, 6-2-17, dr shale 210 ft. Henry R. Dabney's No. G1, 20-2-18, sd 1506 ft. Pomoc Oil Co.'s No. 1, 8-2-17, dr shale 250 ft. Williamson & Danaker's No. 1, 3603-18, sd 956 ft.

SULPHUR MOUNTAIN—Wm. A. Kirk's No. 5, 21-4-22, set 10¾-in csg 1760 ft, tools froze, pulled rig in, td 1770 ft.

MISCELLANEOUS

FRESNO COUNTY—Western Gulf Oil Co.'s S. P. L. 1, 15-17-13, dr shale, caving, 8860 ft. The Texas Co.'s Sec. 1, 1-21-14, lcn. Bergman Oil Co.'s Ora Loma 1, 12-12-11, dr dark brown shale, 6005 ft.

MONTEREY COUNTY—Jas. M. Douglas' No. 1, 36-22-9, dr brown shale 3656 ft.

SUTTER COUNTY—Buttes Oilfields' No. 2, 35-16-1, dr hard shale 4320 ft.

YOLO COUNTY—Pacific Northern Gas & Oil Co.'s Guinda 1, 23-12-3, sd 6770 ft, planning to resume.

SOUTHERN CALIFORNIA

ARTESIA DIST.—Vance Dev. Co.'s Millard 1, rig.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-9, bailing mud, oil & water 1297 ft.

ATWOOD DIST. — Midrich Drilling Co.'s Vejar 1, 26-3-9, sd 590 ft.

FAIRVIEW DIST. — Explorers Drilling Co.'s Norris 1, 9-6-10, dr shale, may set csg to test last 12 ft, td 892 ft. Speik Oil Co.'s Derby 1, 9-6-10, sd 1055, waiting for test at Explorers well.

FULLERTON—Union Oil Co.'s Fullerton Heights 1, 22-3-10, spd May 29.

HERMOSA BEACH—Corniel Oil Corp.'s No. 1, 31-3-14, sd 3900 ft. Oklahoma Oil & Gas Corp.'s No. 1, rig.

HUNTINGTON BEACH, on tidelands—Black Eagle Oil Co.'s Permit 194, No. 1-B, 32-5-11, redr 3142 ft, td 3987 ft.

LOS NIETOS—Rex Anglin Dev. Co.'s Fallis 1, 30-2-11, sd 900 ft.

NEWHALL—B & L Drilling Co.'s B & L 1, 14-3-16, spd May 28.

NEWPORT—Pioneer Drlg. Co.'s Banning 3, 29-6-10, pulling tubing, to ream, to 6452 ft.

NO. LONG BEACH—Geo. L. Clayton's Cooperative 1, 31-3-12, sd 6550 ft.

PICO—Frontier Oil Co.'s No. 1, 12-3-12, cmt 12½-in csg 500 ft, td 1460 ft.

PLACENTIA—Placentia Dev. Co.'s Verde 1, 35-3-9, redr 2820 ft, td 4250 ft.

PUENTE—Signal Pet. Co.'s Rowland 1, 14-2-10, pumping water, td 4908 ft.

SAN FERNANDO—W. L. Alexander's No. 1, 7-2-14, sd 1300 ft.

SAN PEDRO—J. K. Wehrman's No. 1, 14-5-14, sd 1642 ft.

SAUGUS—International Oil Dev. Co.'s Powell 1, 34-5-16, dr shale, sg 1290 ft.

WEST WHITTIER—Midfield Oil Co.'s Walker 1, 19-2-11, sd 4817 ft.

MONTANA

LIBERTY COUNTY—J. H. Hamilton Co.'s Northern Farms 1, ne sw 10-37n-5w, dr 478 ft.

JUDITH BASIN COUNTY—F. E. Hunt's Hobson 1, se sw 20-14n-15e, spd 100 ft.

PONDERA COUNTY — California Co.'s Northwestern Properties 1, sw ne se 20-28n-4w, spd.

TETON COUNTY—Ned Cheedle et al's Balsinger 1, ne se nw 20-27n-5w, dr 539 ft.

WYOMING

ALBANY COUNTY—Ohio Oil Co.'s Chappell 1, sw nw 28-21n-76w, dr 2160 ft.

CARBON COUNTY—Ohio Oil Co.'s Sid Morris 1, nw se 6-20n-77w, Diamond structure, spd. Earl W. Reader, Inc.'s Union Pacific 1, csw sw 19-20n-89w, ur 4¾-in to bottom at 4680 ft. M. K. Queally's Albert 1, se sw 17-25n-79w, rig up.

CONVERSE COUNTY—E. B. Jones' State 1, sw sw sw 16-32n-69w, spd. E. B. Jones' Pittman 1, cne nw 27-32n-69w, sd 750 ft. S. H. Keoughan and Wyoming Southern Oil Co.'s Brown 1, 541 ft west of the center of 27-32n-69w, sd 660 ft.

CROOK COUNTY—Dr. W. G. Earle's Kara 2, sw nw sw 31-49n-67w, mim.

FREMONT COUNTY—Monongahela Oil Co. and S. H. Keoughan's Wisda 1, ne se se 13-28n-93w, Crook's Gap structure, spd.

SWEETWATER COUNTY—Cole et al's test 1, 10-25n-97w, Pickett Lake structure, lcn.

WESTON COUNTY—Gibson Oil Synd's C. H. Payton 1, cne nw 23-44n-63w, rig.

COLORADO

GRAND COUNTY—Colorado Oil Refining Co.'s Linke 1, ne sw sw 13-1n-77w, dr 200 ft.

MONTEZUMA COUNTY — McElmo Oil Co.'s West 1, ne nw ne 4-35n-14w, resuming from 1751 ft.

PARK COUNTY—South Park Oil Co.'s Esche 1, se se nw 5-9s-76w, dr 2508 ft.

PROWERS COUNTY—Trojan Oil & Gas Co.'s Lotus 1, nw ne ne 15-23s-46w, ur 8¼-in to bottom at 2590 ft.

ROUTT COUNTY—Texas Co.'s Sampson 1, sw ne se 2-1s-85w, King Mountain Dome, mim.

NEW MEXICO

EDDY COUNTY—Ralph Spearow et al's McClelland 1, sw nw ne 22-22s-23e, dr 4100 ft.

McKINLEY COUNTY—Dave K. Stacey et al's Webber 2, sw sw nw 29-20n-9w, dr 300 ft.

BERNALILLO COUNTY—Norrins Realty Co.'s Elleana Gallegos 1, nw nw 19-11n-4e, rig up.

MICHIGAN

MIDLAND COUNTY — McClanahan Oil Co.'s Oliver 1, Porter twp, sec 23, driving pipe 100 ft; Converse 1, Greendale twp, sec 28, dr 900 ft. L. G. Thompson's Shirts 1, Greendale twp, sec 17, co 2390 ft. Geo. Hanner's Hoyt 1, Jasper twp, sec 24, fsg 150 ft. Jasmid Oil Corp.'s Pietscher 1, Jasper twp, sec 28, csg 3300 ft. Melvin & Brehm's Whitaker 1, Geneva twp, sec 19, dr 1950 ft.

ISABELLA COUNTY — W. J. Bernier's Duncan 1, Vernon twp, sec 9, fsg 3250 ft. Chartier Oil Co.'s Willey 1, Vernon twp, sec 29, driving pipe 250 ft. McClanahan Oil Co.'s Wonsey 1, Denver twp, sec 33, lcn; Hicks 1, Denver twp, sec 27, dr 1450 ft. Youman & Burke's La Fever 1, Sherman twp, sec 32, dr 1050 ft.

OGEMAW COUNTY—McClanahan Oil Co.'s Gulliford 1, West Branch twp, sec 29, testing Monroe lime 3550 ft, sg; Boutell 1, Ogemaw twp, sec 5, fsg 692 ft. C. A. Perry's Wobig 1, Mills twp, sec 6, sr 1750 ft. Will C. Mee's Gibbs 1, Mills twp, sec 30, mim.

MECOSTA COUNTY — Taggart Brothers' McKeough 7, Austin twp, c-sw 2-14-9w, lcn. Bryan and Martin's Sheets 1, Millbrook twp, nw se nw 35-13n-7w, lcn.

MONTCALM COUNTY — Daily Oil Co.'s Blair 1, Ferris twp, sec 11, dr 1400 ft. Theodor Oil Co.'s Sherwin 1, Home twp, sec 13, dr 623 ft. Old Dutch's Fargar 1, Belvadire twp, sec 11, wo tools. Pure Oil Co.'s Hansen 1, Home twp, sec 10, csg 1084 ft, rust. Rex Oil Co.'s Johnson Heirs 1, Home twp, sec 17, dr 800 ft. Walter and Miller's Durbin 1, Crystall wp, sec 11, mim. W. J. Wilson's Robinson 1, Richland twp, sec 27, sd 450 ft.

GRATIOT COUNTY—Mid State Development's Yost 1, Bethany twp, sec 27, mim.

CLARE COUNTY—McClanahan Oil Co.'s Frackelton 1, Lincoln twp, sec 18, skidding rig.

IONIA COUNTY—J. L. Strachen's Moss 1, North Plains twp, sec 19, sd 2900 ft.

EATON COUNTY—W. J. Bernier's Woodruth 1, Benton twp, sec 5, sd 3083 ft.

SAGINAW COUNTY—Chapin Oil & Gas Co.'s Sutlif 1, Chapin twp, sec 16, dr 900 ft. White Star Co.'s State Bank 1, Birch Run twp, sec 26, testing oil show in Dundee 2600 ft. Crabon Oil Co.'s Berg 1, Birch Run twp, sec 26, dr 1950 ft.

GENESEE COUNTY—Power Oil Co.'s Begole 1, Flint twp, sec 31, dr 1750 ft.

HILLSDALE COUNTY—B. D. Chandler's Brickner 1, Wright twp, sec 11, dr 900 ft. Chas. Anderson's Cousens 1, Jefferson twp, sec 14, fsg 200 ft.

ARENAC COUNTY — Oil State Corp.'s Sheffer 1, Mason twp, ne sw se 18-20n-5e, dr 200 ft.

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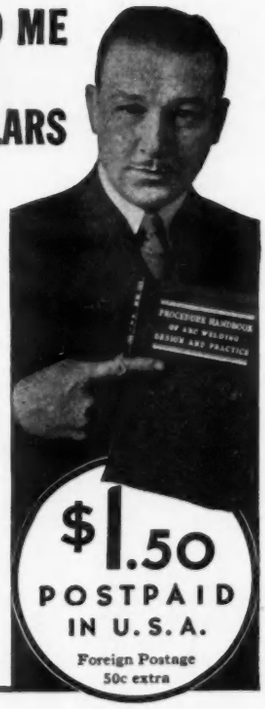

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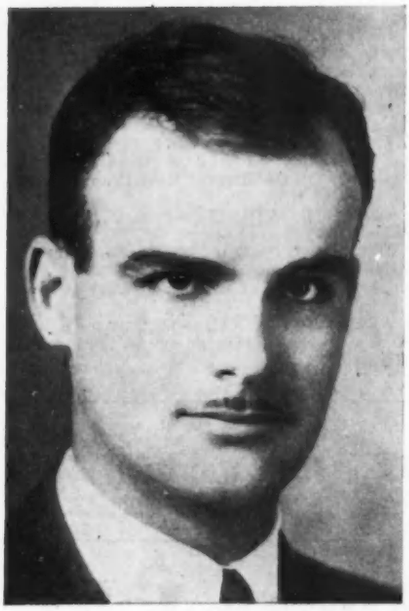
NEWS *from the* *Industry's* EQUIPMENT MAKERS

Lincoln Electric Makes Taylor Coast Manager

Lincoln Electric Company has announced the appointment of S. H. Taylor, Jr., as Pacific Coast manager of the company. He will have headquarters in San Francisco. For the past four years Taylor has been in charge



S. H. TAYLOR, JR.

of the Los Angeles office, and previous to that period spent some time at Cleveland headquarters of the company, where he was engaged in research and applications of production welding. Since his graduation from Western University, he has been active in some branch of the welding industry. He has the distinction of being partially responsible for one of the first arc welded office buildings ever erected. He has also given much time to the study of automatic arc welding. As Pacific Coast manager, Taylor will have charge of sales and service of all Lincoln products in that territory.

Petroleum Equipment Code Authorities Approved

National Recovery Administrator Hugh S. Johnson on June 2 approved the method of selection and recognized the personnel of code authorities for the American petroleum equipment industry and trade as follows:

Chairman W. L. Childs, vice president, Reed Roller Bit Company, Houston, Texas; Vice Chairman J. A. Crawford, president, Republic Supply Company of California, Los Angeles, Calif.; Percy C. Jones, president, S. M. Jones Company, Toledo, Ohio; J. A. Geismar, president, National Supply Company of Delaware, Toledo, Ohio; B. F. Harris, president, Oil Well Supply Company, Pittsburgh, Pa.; H. J. Lockhart, president, Parkersburg Rig and Reel Company, Parkersburg, W. Va.; E. S. Dulin, president, Byron-Jackson Company, Los Angeles, Calif.; D. S. Faukner, vice president, National Supply Company of California, Torrance, Calif.; L. H. Keim, vice president, Oil Well Supply Company, Los Angeles, Calif.; F. C. Merritt, president, Elliott Core Drilling Company, Los Angeles, Calif.; W. A. Trout, vice president, Emsco Derrick & Equipment Company, Clearwater, Calif.; J. L. Shakely, vice president, Frick-Reid Supply Corporation, Tulsa, Okla.; F. E. Bernsen, president, Lucey Products Corporation, Tulsa, Okla.; A. A. Bushow, president, Bridgeport Machine Company, Wichita, Kansas; Earl W. Miller, vice president, American Iron & Machine Works Company, Oklahoma City, Okla.; A. A. Moody, vice president, Jarecki Manufacturing Company, St. Louis, Mo.; W. J. Morris, president, Continental Supply Company, Dallas, Texas; F. S. Carothers, manager, Norvell-Wilder Supply Company, Houston, Texas; B. Boykin, Jr., vice president, International Derrick & Equipment Company, Beaumont, Texas; Stanley P. Brown, vice president, Hughes Tool Company, Houston, Texas; John T. Crotty, president, Republic Supply Company, Houston, Texas, and T. T. Word, president, Word Supply Company, Houston, Texas.

WILL I. LEWIS

Bill Lewis Joins Reed Roller Bit Company

Rex G. Hamaker, vice president in charge of sales for Reed Roller Bit Company, announces the locating of Will I. Lewis as direct factory representative in Dallas, Texas.

Lewis, better known as "Bill" to the oil fraternity, has had varied experiences in the oil fields for the past 15 years, having served his time as roughneck and driller in the Gulf Coast fields, and was later a salesman for Boykin Machinery & Supply Company under the supervision of Mr. W. L. Childs, now vice president and general manager of Reed Roller Bit Company. He was in drilling contracting business for himself in the Mexia district where he drilled several wildcat wells, and was co-discoverer of the Cedar Creek field, southwest of Mexia. Later he was district manager for McEverlast Company of Los Angeles; he was also Southwestern representative for Johns-Manville Company of New York, specializing in pipe line coatings.

National Tank Company's new Gulf Coast home, located at 3511 McKinney Avenue, Houston, where a complete stock of National oil and gas separators and National tanks, both welded and bolted, in all sizes are carried. This National branch represents headquarters for Texas, New Mexico, Arkansas and Louisiana, over which Floyd Senter is district manager. Howard Ammerman is office manager and James Ward is in charge of service crews in the fields.

New Equipment for the Field

Machinery . . . Tools . . . Catalogs . . . Books

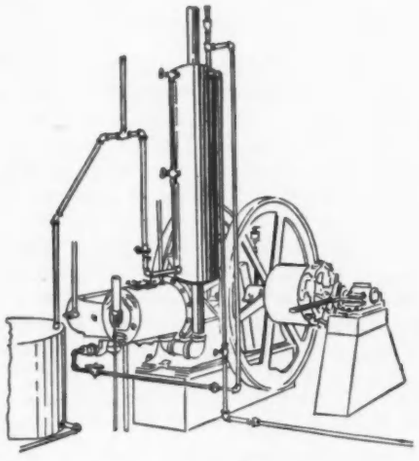
▼ ▼ ▼

Gas Generator

AMERICAN IRON & MACHINE WORKS COMPANY

American Iron & Machine Works Company, Oklahoma City, has developed a new type gas generator which will enable operators to minimize fuel costs, according to the manufacturer. It was designed to generate gas from crude oil by pumping oil direct from the well into a tank for the generator, and allowing it to by-pass back into the well. This method permits little or no loss of gravity, it is claimed.

The generator was designed especially for use in oil fields



American Gas Generator

where gas pressure has diminished to the extent that oil, gasoline or electricity must be used. Fuel costs are practically negligible when this method is used, the manufacturer claims. The generator stands above the engine and occupies little space. Patents have been applied for.

Safety Joint

J. A. KAMMERDINER JAR COMPANY

J. A. Kammerdiner Jar Company, Los Angeles, has announced the Type "B" Kammerdiner Safety Joint, a tool which was designed to provide greater safety in drilling. It is also used for perforating and fishing operations.

This safety joint is set to allow the pipe above it to slip upward when the strain taken on the pipe is near the limits of the strength of the pipe. The strain necessary to operate the tool is set to any amount desired and is coordinated with the number of points on the weight indicator that will produce the releasing strain. As soon as the strain on the pipe reaches this point, the safety joint permits the pipe to slip up with a sharp sudden impact. The blow thus produced right at the time the tools are stuck is often able to free them without further trouble.

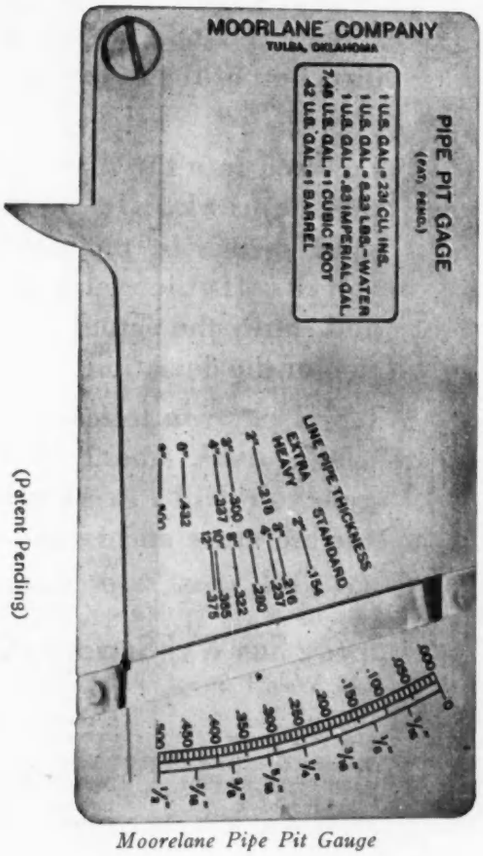
The safety joint is locked in a manner that prevents it from being unscrewed from the tools until after it has been opened by the required strain taken on the pipe. It is constructed with left-hand threads on an inner mandrel and when it is opened, it is easily unscrewed by rotating the drill pipe to the right.

The tool is generally run one joint above the drill collar but it can be placed anywhere desired. It not only prevents parting of the pipe by too great a strain but also provides a means of unscrewing from the tools at the point where the break is to be made, the manufacturer claims. When run back into the well and its screwed connection made, it is reset by the same weight necessary to release it and it is again ready to function as a safety joint that cannot be unscrewed until it is once more released by the required strain being taken on the pipe.

Pipe Pit Gauge

MOORLANE COMPANY

Moorlane Company, Tulsa and Houston, has developed a pipe pit gauge which is used to tell the thickness of pipe that shows corrosion or wear, or to determine whether used pipe is strong enough to meet certain conditions. The gauge also shows the thickness of any pipe.



Moorelane Pipe Pit Gauge

The gauge is made of .050-inch stainless steel, and is 2-11/16 inches wide and 5¼ inches long. The indicator arm has a stylus which fits into the pits of the pipe being measured. This arm is pivoted in the lower left hand corner of the gauge. A guide is fastened to the gauge to protect

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Sectional view of a SURWEL Clinograph

***The* SURWEL Clinograph**

and guide the indicator arm. The scale on the right of the guide as shown is an arc and is expressed in sixteenths and thousandths of an inch. The gauge fits into a leather case and may be carried in the pocket.

Aluminum Paint

ALUMINUM INDUSTRIES, INC.

Aluminum Industries, Inc., Cincinnati, Ohio, has developed an aluminum paint which the manufacturer claims will give full protection to surfaces. The new manufacturing process explodes the powder lumps which form during processing. Aluminum has a tendency to lump during processing, but by application of a 31-inch vacuum to the paint, the air within the lump is released with an explosive effect, according to the manufacturer.

Third Edition Petroleum Code Handbook Published

The Petroleum Code Handbook for 1934, third edition, now ready for distribution contains information of interest to all branches of the industry. It includes text of the recovery act, and supplements; the petroleum industry code—rules, regulations, interpretations, purchasing agreement, marketing agreements, supplemental marketing agreement, and the Pacific Coast cartel. The handbook also contains sections on the court actions under the code, enforcement of the code, price fixing, labor provisions, a record of the conservation movement, production and refinery control orders and regulations, marketing and transportation orders and regulations, and a code directory section giving the personnel of federal and state executive and regulatory agencies, and all of the code committees, regional and state. In addition it contains a list of about 5000 jobbers and independent filling-station chain owners.

The handbook also includes revised facts and figures of the petroleum industry, comprising world statistics, exports, crude oil and gasoline prices, gasoline and motor vehicle taxes, crude oil production, wells, natural gasoline, government oil lands, refineries and refining, products of refining, oil pipe-line statistics, tank cars, railroad transportation, motor vehicles registered and produced, aeronautics, and oil heating.

Purchasers of the handbook will receive without extra charge, 12 monthly supplements keeping code information up-to-date. The Petroleum Code Handbook can be secured through the Book Department, Gulf Publishing Company, Houston, Texas. Price $10.00.

A.P.I. Oil Well Pump Code

A second edition of the American Petroleum Institute "Code of Recommended Field Practice in the Care and Use of Oil Well Pumps" has been issued under date of January, 1934. It supersedes the first edition dated July, 1931, and is key-numbered "API Code No. 11-A, Second Edition."

The code was prepared by the Division of Production Committee on the Standardization of Pumping Equipment and Engines, and was approved at the Institute's annual meeting at Chicago in November, 1933. It was amended at the annual meeting at Chicago in October, 1933, by the addition of a section on cold-drawn barrels.

Copies are available at 25c each from Institute headquarters, 50 West 50th St., New York, N. Y., or Division of Production offices, 1508 Kirby Bldg., Dallas, Texas.

Squeaks *from the* BULL WHEEL

She was an attractive young widow. She entered the hotel lounge and seated herself next to a handsome and dashing young brute. She coughed lightly, but the stranger ignored her presence. When their eyes finally met, she shot at him a flirtatious glance that indicated plainly that she desired to make his acquaintance. With all of this the male seemed cool and gave no answering sign.

Finally a handkerchief dropped to the floor and she murmured softly, "Oh, I've dropped my handkerchief."

The man turned an eye to the woman and responded, "Madam, my weakness is beer."

It's wonderful what some insects can do. A grasshopper can jump 200 times its own length!"

"That's nothing; I once saw a wasp raise a 200-pound man three feet off the ground."

"So you're not going to Paris this year?"

"No—it's London we're not going to this year; it was Paris we didn't go to last year!"

"Do you think we can squeeze in here?" he asked, as he entered a crowded bus with his big date.

"Dear," she whispered, "I think we'd better wait until we get home."

"Now, before we drive much farther, I want you to understand that I don't neck, so don't try to hold my hand or kiss me. Is that clear?"

"Yes."

"Now, since that is settled, where shall we go?"

"Home."

Conductor: "I'll have to charge you full fare for your little brother—he's wearing long pants."

Young Brother: "Gosh sis, you ride free!"

Why were you kissing my daughter in that dark corner last night?

Now that I've seen her in the daylight, I sort of wonder myself.—Cornell Widow.

"Three of those apples you sent me were rotten. I'll bring them back."

"Not at all, madam," replied the man. "You needn't bring them back. Your word is as good as the apples."

He: "I feel as though I had known you for years."

She: "You certainly do."

There's nothing new under the sun.

Yeah. And there's a lot of old stuff pulled off under the moon.

Mother (on entering the room unexpectedly): "Well, I never—"

Daughter: "Oh, mother, you must have."

"Is he fresh? Why I had to slap him three times before I gave in."

"What's good for my wife's fallen arches?"

"Rubber heels."

"What shall I rub them with?"

Proprietress of a Woman's Shoppe (standing in doorway): "Step in, Sir."

Newly Affiliated Husband: "No, I'm after a pair of knickers."

"Is my wife forward?" asked the passenger of the ship's captain.

"Well, er—" replied the truthful captain, "a little."

Girls with crooked stocking seams
Never make up necking teams.

Black: "I don't see how the women can do this here fan dancing."

White: "I don't either. It certainly is a ticklish business."

"My boss is always drumming with his fingers. Don't you hate a man who does that?"

"I certainly do. It makes runs in my stockings."

"How's the party?"

"Oh, it's been nip and tuck all evening."

"What do you mean, nip and tuck?"

"Well, first we had one nip, and then we tuck another."

Ginsberg was riding in a taxicab when the driver suddenly lost control, and the car sped forward at a terrific rate.

"Hey!" yelled Ginsberg in alarm. "What the matter?"

"I don't know," answered the driver grimly, "I can't stop her!"

"Well, for heaven's sake!" Ginsberg shouted, "can't you at least turn off the meter?"—B'nai B'rith Magazine.

Employer—Do you believe in love at first sight, Miss Vamper?

Stenograper—Well, I think it saves a lot of time.

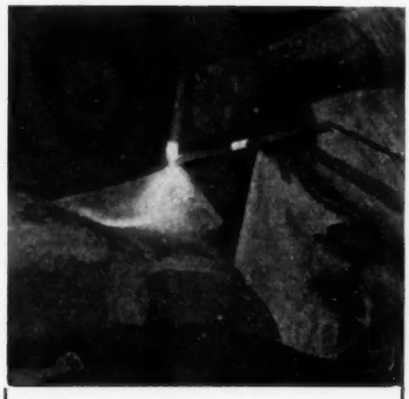
"Waiter, here's half a buck for you."

"Yes, sir. Do you want to reserve a table?"

"No. When I bring my girl friend in here tonight, tell us they're all reserved."

The lawyer was rehearsing the beautiful actress as to her appearance in the divorce court. She listened with mild interest and finally asked a question.

"Who plays the part of the judge?"



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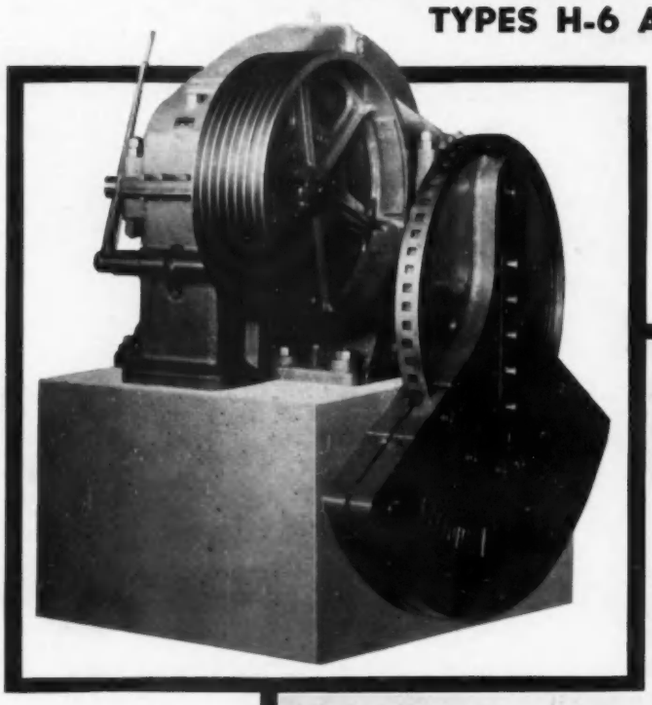
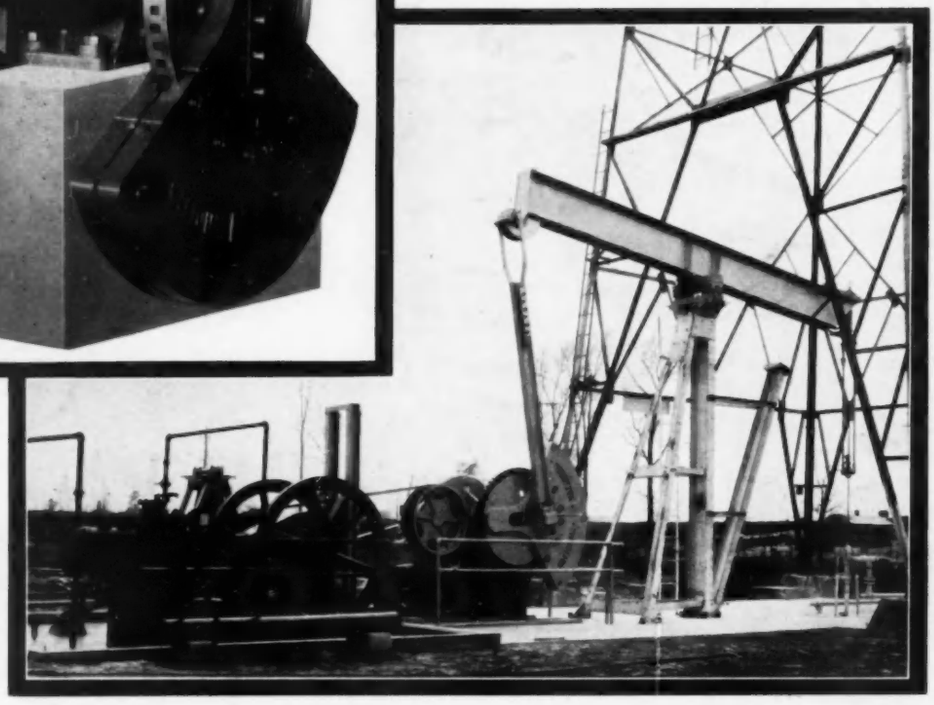


An East Texas installation of the H-6 Pumping Unit with National Type H Belt Tightener and with Superior 40 H. P. Gas Engine.



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